ADMINISTRATION REPORT

OF THE

INDIAN STORES DEPARTMENT

FOR THE YEAR

1930-31

CALCUTTA: GOVERNMENT OF INDIA
CENTRAL PUBLICATION BRANCH
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(*Vide* paragraph 71.)

ADMINISTRATION REPORT OF THE INDIAN STORES DEPARTMENT FOR THE YEAR 1930-31.

CHAPTER I.

1. *General.*—The turn-over for the year under review fell short of that attained during the year 1929-30, as the figures of work done for that year included a substantial volume of business carried over from the preceding year. Notwithstanding a large drop in prices, the value of work done during 1930-31, in terms of fees earned, exceeded however the average of the two preceding years by Rs. 46,851. Judged by the volume of work which passed through the Department, there was a substantially greater increase during the year under review. A point to be borne in mind in this connection is the fact that the fees are calculated on value both in respect of the stores purchased and the major portion of those inspected, and the more therefore the Department fulfils one of the primary objects of its existence, *viz.*, the economical purchase of stores for the public service, the less it earns in fees.

2. *Utilisation of the services of the Indian Stores Department by Government Departments in India.*—It was mentioned in paragraph 2 of the report for the previous year that orders were issued by the Department of Industries and Labour during the year 1929-30 to all authorities under their direct control that the purchase of all classes of stores, handled by the Indian Stores Department, should, in future, be entrusted invariably to that Department. Further progress was made in this direction during 1930-31 and similar orders were issued by the Department of Industries and Labour to all minor Local Administrations, and by the Home, Commerce and Foreign and Political Departments to the authorities under their direct control. As a result of these orders the value of purchases on behalf of those authorities exceeded the corresponding figure of the preceding year by over a lakh of rupees, in spite of a reduction of about Rs. 3 lakhs in demands of a non-recurring nature from the Andamans Commission and of about Rs. 1½ lakhs from the Civil Aviation Department. The question of the issue of similar orders to other central departments is under the consideration of the Government of India.

3. *The Rupee Tender System.*—The new rules for the supply of articles required to be purchased for the public service came into full force from the 1st January 1931. Similar rules have been introduced by the Governments of Madras, Assam, Bombay and Central Provinces. These rules prohibit the purchase of important plant, machinery and iron and steel work except from firms approved by the Indian Stores Department ; the two latter Governments have further prescribed that demands for all classes of stores handled by the Department, exceeding Rs. 500 in value, should ordinarily be placed by all their officers with the Indian Stores Department. The issue of similar rules by the remaining Provincial Governments is still under consideration. It is too early yet to say what will be the cumulative effect of these orders on the volume of work that will devolve in future on the Indian Stores Department.

4. *Activities of the Purchase branch.*—The number of orders placed during the year increased from [redacted]. 29,767 to [redacted]. 33,311, but due to the lower level of prices prevailing and the general financial stringency, the value of contracts placed decreased from Rs. 4,29,26,000 to Rs. 3,76,83,000, *vide* paragraph 18. The value of stores actually supplied and accounted for during the year, however, exceeded the corresponding figures for the previous year by Rs. 35,65,000 (from Rs. 4,17,14,000 to Rs. 4,52,79,000).

5. *Activities of the Inspection branch.*—The value and tonnage of stores inspected during the year amounted to Rs. 6,61,35,107 and 3,28,013 tons as compared with Rs. 7,47,99,137 and 3,43,109 tons respectively during 1929-30 (*vide* appendices XIII and XIV). The number of tests and analyses carried out at the laboratories of the Metallurgical Inspectorate and the Government Test Houses at Calcutta and Bombay amounted to 16,256 as compared with 14,273 during the preceding year (*vide* appendix XV). These results may be considered satisfactory if comparison is made with the turn-over of the year 1929-30, after eliminating from it the heavy carry over from the year 1928-29 which inflated the results of that year. Further details will be found in Chapters IV, V and VI.

6. *Indents on the India Store Department, London.*—There was a further marked reduction in the number and value of indents on the London Stores Department which were examined by the Department during the year. On the other hand the proportion of the value of items challenged to the total value of indents is steadily increasing, as will be observed from the following statement showing the results of the examination of indents during the years 1927-28 to 1930-31 :—

Year.	Number of indents examined.	Value of indents examined.	Value of items challenged.	Percentage of the value of items challenged to total value of indents.
		Rs.	Rs.	
1927-28	1,630	7,65,40,013	15,66,392	2·0
1928-29	1,533	6,28,85,361	10,41,133	1·7
1929-30	1,414	3,16,06,941	14,95,803	4·7
1930-31	1,165	2,83,80,217	14,82,188	5·2

7. *Utilisation of the services of the Indian Stores Department by authorities outside India.*—The services of the Department were again utilised by the Resident Engineer, Royal Air-ship Base, Karachi, for the purchase and inspection of stores. Tents of the value of over Rs. 9,000 were inspected on behalf of the Palestine Government and about 3,000 tons of cast iron pipes and specials were inspected on behalf of the Singapore Municipality.

The facilities offered by the Inspection Branch of the Department were brought to the notice of the Governments of South Africa, Ceylon and Malaya through the Agents of the Government of India in those countries. Orders have been issued by the Government of Ceylon to the Railway Department and the Controller of Revenue to publish in the Indian Trade Journal all tender notices amounting to Rs. 5,000 or over in respect of stores obtainable in India. The Commissioner of Police, Federated Malaya States, has also offered to publish his invitations to tender in the Indian Trade Journal and negotiations are in progress in that direction.

8. *Financial position.*—The final accounts of the receipts and expenditure of the Department for the year 1930-31 are not at present available, but a provisional account has been prepared by the Audit Officer, Indian Stores Department, and included in the Financial (VIII) Chapter of the Report. The result of the working of the year indicates a net deficit of Rs. 9,24,759.

The activities of the Department include, however, besides purchase, inspection and testing of stores which alone are represented on the credit side of the financial statement, a considerable amount of unremunerative work connected with the development of industries by way of advice to manufacturers, scrutiny of demands for purchases from abroad, examination and preparation of specifications for other Government departments and collection of general market intelligence relating to sources of supply. Some details of this work are given in Chapter VII. It will thus be appreciated that the deficit shown in the pro-forma account does not represent an actual loss to the State. Moreover, it should not be overlooked that the departmental charges for the purchase and inspection of stores, which form the main source of the revenue of the Department, are fixed on an entirely arbitrary basis and are admittedly inadequate to meet the working expenses of a purchase and inspection organisation on the present turn-over of the Department.

The question of separating the expenditure connected with the non-commercial activities of the Department from its purely commercial operations is under examination in consultation with the Director of Commercial Audit and it is hoped to evolve a system by which the true financial position of the Department will be more correctly exhibited in future reports.

A complete statement of the work done and fees earned by the Department, year by year, since its constitution, will be found in appendix XVIII.

9. *Organisation of the Indian Stores Department and procedure in force.*—A brief description of the organisation of the Department, with hints for the guidance of indenting authorities, will be found in appendix I to this report. Full details are given in a pamphlet copies of which can be obtained free of charge on application to the Chief Controller of Stores.

CHAPTER II.

ORGANISATION.

10. *Changes in Organisation.*—The work connected with the collection, maintenance and dissemination of information relating to sources of supply and market prices, and with the registration of firms, which since the creation of the department had been carried out under the control of the Director of Purchase and Intelligence, was transferred early in the year to the direct control of the Head of the Department. This change was found necessary as a result of the introduction of the revised rules for the supply of articles required to be purchased for the Public Service. It was anticipated that this class of work must acquire increased importance under the revised rules and it was considered desirable that it should be brought under the direct control of the Head of the Department, thus leaving the Director of Purchase to attend solely to the purchase work which for the same reasons was expected to increase very substantially in importance, value and complexity. To give effect to the re-organisation, the designation of the appointment of Director of Purchase and Intelligence was altered to that of Director of Purchase, and an appointment of Deputy Director of Administration and Intelligence was created for the charge of the Administration and Intelligence branch of the Department. An appointment of Assistant Director of Administration and Intelligence was also created for the disposal of the less important work of the two branches and the existing gazetted appointments of Assistant Chief Controller of Stores and Assistant Director of Intelligence and the non-gazetted appointment of Chief Superintendent were simultaneously abolished. These changes were brought into effect from the 19th June 1930. They have proved to be most successful in furthering the objects in view and have, moreover, resulted in a saving of about Rs. 2,000 per annum in the average cost.

No additional gazetted appointments were sanctioned during the year for the Inspection branch, but certain readjustments were carried out, with effect from the 1st April 1930, to enable that branch to cope with the demands on its services. One of the two existing appointments of Assistant Director of Inspection was converted into an appointment of Deputy Director of Inspection, to provide the Director of Inspection with the services of a deputy of suitable status who could share with him the burden of the administration and control of the Inspection branch of the Department. In view of the increasing utilisation of the services of the circle by Railway Administrations for the inspection of important classes of stores and steady growth of the work devolving on the circle generally, an appointment of the status of Controller of Inspection was created for the charge of the Bombay Inspection Circle ; this charge had hitherto been held by an officer of the rank of Assistant Controller of Inspection. There is a considerable amount of administrative and accounts work in the Calcutta Inspection Circle. It was no longer possible for the Controller to supervise it personally in addition to the supervision of the technical work of the circle. The Controller of Inspection, Calcutta Circle, was, therefore, provided with the services of an officer possessing several years' experience in a responsible position in the accounts department to deal with this work. One of the sanctioned appointments of Assistant Engineer (Inspection) was converted, for this purpose, into a post of Personal Assistant to the Controller of Inspection. The measure has proved a success.

Besides the readjustments explained in the preceding paragraphs, the normal growth of clerical work made it necessary to add a few non-gazetted appointments to the strength of the provincial organisations; it was found possible to do this without increasing the total expenditure by simultaneously abolishing certain other appointments, the need for which was not so urgent.

11. *Organisation of the Department at the end of the year.*—A conspectus of the organisation, as it stood at the end of the year, will be found in appendix II. The appointments sanctioned during the year have been shown in it in italics.

12. *Important changes in personnel.*—Mr. K. M. Kirkhope, C.I.E., V.D., Director of Inspection, proceeded on leave preparatory to retirement from the 15th April 1930, and was temporarily succeeded by Mr. N. Brodie, Superintendent, Government Test House, Alipore. The services of Mr. D. Cardew, V.D., Officiating Loco and Carriage Superintendent, Eastern Bengal Railway, were obtained on loan from the Railway Department for a term of three years and he assumed charge of the post on the 15th December 1930. Lieutenant-Colonel H. M. Alexander, Director of Purchase, was on leave throughout the year and the appointment was held by Mr. R. W. Targett, Deputy Director of Purchase (Textiles), up to the 13th March 1931, from which date that officer also proceeded on leave and was succeeded in the post by Mr. C. A. Williams, Deputy Director of Purchase (Engineering and Miscellaneous).

13. *Scientific investigations.*—Mr. N. Brodie, Superintendent, Government Test House, Alipore, was placed on special duty for a period of two months, to carry out certain important investigations in consultation with the Railway Administrations in Calcutta, the details of which are given in Chapter IV, paragraph 40.

14. *Technical training.*—One of the two Probationary Inspectors, who were selected in the year 1927-28, and of whom mention was made in paragraph 8 of the Report for that year, satisfactorily completed his training in bridge and structural work and was appointed as an Assistant Engineer (Inspection) from the 1st January 1931. The second probationer failed to attain the standard required and his course of training was discontinued in October 1929. He has since been engaged as an Examiner of Stores.

Two other Probationers were selected through the Public Service Commission for training, during the year under review, one to specialise in the inspection of bridge and structural work and the other in the inspection of wagons. Arrangements were also made for the training of a member of the staff of the Government Test House, Alipore, in Dye chemistry, in a commercial laboratory at Bombay.

15. *Recruitment of the gazetted staff.*—During the year under review, besides Mr. K. M. Kirkhope who is on leave preparatory to retirement, five officers (all non-Indian) left the Department. Twelve new appointments were made to the gazetted staff, of whom ten are Indians, including five subordinates promoted from the ranks of the non-gazetted staff. The Public Service Commission were unable to find suitably qualified Indians for two vacant posts, which required a knowledge of inspection of wagons. A European officer was accordingly recruited through the High Commissioner for India for one of these posts, and, as stated in the preceding paragraph, an Indian candidate was selected to

undergo a course of training for the second post. In the meantime a retired Railway officer was appointed to fill the latter post, as a purely temporary measure for one year.

16. *Numbers of European and Indian officers in the Department.*—The effect of the steps taken since the creation of the Department towards the Indianisation of its superior staff was remarkably noticeable during the year under review. Forty out of seventy officers employed in the Department on the 31st March 1931 were Indians and only thirty non-Indians, as against 30 Indians and 33 non-Indians at the close of the preceding year. The progress of Indianisation and the proportion of Indians and non-Indians in the gazetted staff at various stages since the constitution of the Department in 1922 are indicated in the graph in appendix III.

17. *Recruitment of the subordinate technical staff.*—Six technical subordinates (all Indian) were recruited during the year. This class is composed entirely of Indians, with one exception.

CHAPTER III.

WORK OF THE PURCHASE BRANCH.

18. *General.*—The total value of orders placed by the various sections of the Purchase branch during the year amounted to Rs. 3,76,82,696, as compared with Rs. 4,29,25,701 during the preceding year. The decline of 12 per cent. (amounting to Rs. 52,43,005) in the value of purchases is to a large extent attributed to the general fall in prices of commodities, which in several instances far exceeded this percentage. This is evidenced by the fact that the number of indents received during the year for compliance actually increased from 17,058 to 23,233 and the number of contracts placed from 29,767 to 33,311. The number of items dealt with declined from 68,957 to 67,224, but this reduction occurred entirely in the items dealt with in the provincial purchase circles. As the value of orders placed by these organisations actually exceeded the previous record, in spite of the fall in prices, the reduction in the number of items merely represented a decline in petty demands which indenting departments had been advised to handle direct. The number of items dealt with in the Headquarters Office, which include important purchases, rose from 24,509 to 25,091. An analysis of the figures of indents, items and orders for the year under review and two preceding years is given in the table below :—

Organization.	No. of indents received.			No. of items in the indents received.			No. of orders placed.		
	1928-29.	1929-30.	1930-31.	1928-29.	1929-30.	1930-31.	1928-29.	1929-30.	1930-31.
Calcutta Circle	2,960	4,416	6,073	17,930	19,687	18,855	6,476	8,573	9,217
Bombay Circle	2,148	2,051	2,644	7,912	8,024	10,355	3,518	3,905	5,138
Karachi Circle	1,925	2,214	2,452	14,897	16,737	12,923	5,895	6,434	5,528
Total Provincial Circles..	7,033	8,681	11,169	40,739	44,448	42,133	15,889	18,912	19,883
Headquarters Office ..	3,595	8,377	12,064	11,978	24,509	25,091	6,033	10,855	13,428
Grand Total ..	10,628	17,058	23,233	52,717	68,957	67,224	21,922	29,767	33,311

Details of the values of orders placed will be found in appendices IV to VII.

19. *Clientele of the Department.*—There was a further addition during the year to the list of authorities utilising the services of the Department for the purchase of supplies required by them. Thirty-seven new authorities entrusted their purchases to the Department for the first time since its constitution. The value of orders placed on their behalf amounted to Rs. 4,01,227 distributed as below :—

	No.	Amount.
		Rs.
(1) Central Departments (Civil, Military and Railways)	12	3,16,222
(2) Provincial Governments	18	58,814
(3) Indian States and Quasi-Public bodies	7	26,191
Total	37	4,01,227

The departments which chiefly contributed to this amount were :—

	Rs.
(1) The Chief Inspector of Lighthouses	2,13,956
(2) The Imperial Council of Agricultural Research	70,052
(3) The Department of Industries, Madras	27,277
(4) Gwalior State.	18,438

Variations in demands.—The following statement shows the fluctuations in the values of orders placed on behalf of various authorities as compared with the corresponding figures of the preceding year :—

	Rs.	% of decline.
Reductions —		
Military Department	13,64,020	11
Railway Administrations	22,48,587	15
Provincial Governments	11,93,982	16
Indian States	8,04,800	52
Quasi-public bodies	27,474	18
British Government (Royal Airship Base, Karachi) ..	10,071	73
Total ..	56,48,934	16
Increase—		
Civil Departments of the Central Government ..	4,05,929	6
Net reduction ..	52,43,005	12

21. *Purchases on behalf of the Civil Departments of the Central Government.*—Notwithstanding the existence of the causes which adversely affected the business generally, the demands from Central Civil departments increased by Rs. 4,05,929. This is attributable to the orders which have been issued to certain Departments of the Government of India regarding the compulsory purchase of stores, which are referred to in paragraph 2.

22. *Purchases on behalf of the Military Department.*—In pursuance of the recommendations of the Public Accounts Committee on the subject of entrusting the purchase of requirements of the departments of the Central Government to the Indian Stores Department in an increasing degree, a Purchase Co-ordinating Committee was formed during the year, comprising representatives of the Master General of Ordnance Branch and the Indian Stores Department, to deal with the question in relation to the requirements of the Army. The only important decision reached by this Committee so far is that the purchase of such stores for the Army as were previously obtained by indent on the Director-General, India Store Department, London, and which will in future be purchased in India, under the provisions of the revised Stores Rules, would be entrusted to the Indian Stores Department.

There was a heavy diminution in the demands from the Master General of Ordnance Branch (Rs. 11,88,427) and the Military Engineer Services (Rs. 7,10,043) which was partly counterbalanced by increases in the indents received from the Royal Indian Marine (Rs. 3,79,697) and the Quarter Master General's Branch (Rs. 1,55,830). The chief reasons for the decline

were a further reduction in the demands for clothing equipment for the Army, withdrawal from the Indian Stores Department of the purchase of fuel oil, reduction in the demands for steel sections from the Military Engineer Services and a general drop in prices.

23. *Purchases on behalf of Railway Administrations.*—Two meetings were held with the Railway Department (Railway Board) during the year to consider the question of making further additions to the list of requirements of the Railway Administrations the purchase of which has been made over to the Indian Stores Department. As a result, substantial additions were made to the list, the more important of which were :—

1. Vessels, sea-going, and river-craft.
2. Vacuum brake fittings (including rubber fittings).
3. Motor vehicles and accessories.
4. Sheets, asbestos cement.
5. Iron, Pig.
6. Oil, kerosene and gas making.
7. Petrol.
8. Electric generating plant and equipment.
9. Fans, Railway carriage.
10. Train lighting equipment.
11. Primary cells.
12. Oxygen.

Owing to the existence of unexpired Railway contracts for several of these items, the effect of these additions on the turn-over of the Department will not be felt until next year.

Due to a fall in prices and curtailment of demands, on account of financial stringency, the value of orders placed on behalf of Railway Administrations (including Company Railways) declined from Rs. 1,50,46,429 to Rs. 1,27,97,842. The purchases made for the North Western Railway, the Burma Railways, the Madras and Southern Mahratta Railway, the South Indian Railway and the Central Publicity Bureau increased by Rs. 11,55,000, but those for the East Indian Railway, the Eastern Bengal Railway, the Great Indian Peninsula Railway, the Bombay, Baroda and Central India Railway, the Assam Bengal Railway, the Bengal Nagpur Railway, the Jodhpur Railway, and the Mysore Railways declined by Rs. 34,04,000. As the total purchases made for Railway Administrations did not exceed the limit of Rs. 175 lakhs, the sliding scale of charges sanctioned by the Government of India in the year 1928, which allows a rebate on the charge of 1 per cent. levied by the Department for purchase of stores in excess of that limit, could not be brought into effect.

24. *Purchases on behalf of major Local Governments.*—The total value of stores pu chased on behalf of the major Local Governments amounted to Rs. 62,48,110, as against Rs. 74,42,092 during the year 1929-30. The demands from the Governments of Mad as, United Provinces, Bihar and Orissa, and Burma increased by over Rs. six lakhs, but those from the Governments of Bombay, Bengal, Punjab, Assam and Central Provinces fell short of the

previous year's total by about Rs. 18 lakhs. The decrease in the value of demands from the Government of Bombay was caused by a further contraction of Rs. 10,34,210, in the requirements of the Lloyd Barrage and Canals Construction Scheme. The demands from other departments under the Government of Bombay exceeded the corresponding figure for the previous year by Rs. 2,73,838, of which the Public Works Department contributed Rs. 2,19,294 and the Police Department Rs. 70,664. There was a heavy decline, from Rs. 5,18,205 to Rs. 2,53,499 in the value of cotton and woollen yarn purchased on behalf of the Punjab Jails. The textile purchases on behalf of that department consequently diminished by Rs. 3,06,700. The purchases on behalf of the Public Works Department in the Punjab, Assam and Central Provinces also show a diminution of Rs. 4,74,339, Rs. 1,56,221 and Rs. 92,112 respectively, owing to the receipt of indents during the year 1929-30 for special non-recurring demands.

The increases in the purchases on behalf of the Governments of United Provinces and Burma, which amounted to Rs. 1,40,504 and Rs. 1,08,545 respectively, are deserving of special notice. The Government of the United Provinces have established a Stores Purchase organisation of their own, which after detailed examination of various contracts made by the Indian Stores Department decided to operate against several such contracts, particularly those relating to paints, lubricants, disinfecting fluids, oil fuel, safes, cement and road dressing materials. The purchases on behalf of the Government of Burma amounted to Rs. 1,92,369, as against Rs. 83,824 during the year 1929-30. These purchases, together with those amounting to Rs. 10,38,489 arranged on behalf of the Burma Railways, include business of a substantial amount secured for the Indian market.

Eighteen new departments, embracing six of the nine major Provinces, placed orders for the supply of stores with the Department for the first time. Altogether 96 Provincial departments utilised the services of the Department during the year.

25. *Effect of drop in prices on the turn-over of the Department.*—The following statement which shows the drop in average prices and increase in quantities in some of the important items of stores handled by the Headquarters office of the department during the year, compared with the corresponding figures for the preceding year, is worthy of close study :—

Name of Article.	Unit.	Quantity purchased.		Average price paid.	
		1929-30.	1930-31.	1929-30.	1930-31.
Textile Stores.				Rs. a. p.	Rs. a. p.
1. Drill, cotton, khaki ..	Yd.	1,402,160	1,448,532	0 8 0	0 6 7½
2. Drill, cotton, blue	,,	627,105	724,544	0 7 9	0 5 6
3. Drill, cotton, bleached ..	,,	412,987	649,954	0 7 4	0 6 0

Name of Article.	Unit.	Quantity purchased. 1929-30.	Quantity purchased. 1930-31.	Average price paid. 1929-30.	Average price paid. 1930-31.
				Rs. a. p.	Rs. a. p.
4. Long cloth, bleached ..	Yd.	49,440	130,152	0 4 8	0 4 3
5. Blanketting cloth	,,	26,974	72,000	2 8 0	1 14 0
6. Greatcoat cloth	,,	15,333	94,991	5 1 0	4 10 0
7. Gabardine	,,	19,300	27,740	0 10 0	0 8 3
8. Flannel	,,	6,897	24,327	3 12 0	2 5 0
9. Blankets	Each	171,579	212,772	5 8 0	4 10 0
10. Sheets, hospital	,,	11,100	15,553	2 7 6	1 14 0
11. Socks, worsted	Pair	591,372	596,220	0 11 3	0 8 0
12. Cotton waste, coloured ..	Cwt.	35,274	72,499	17 13 0	14 15 0
13. Cotton waste, white ..	,,	15,688	19,124	27 15 0	18 7 0
14. Cordage, cotton	Fathom.	231,600	266,832	0 2 6	0 1 6
15. Wool cotton, absorbent ..	lb.	26,000	172,086	0 12 6	0 11 6
Engineering and allied stores.					
1. Oil, linseed, double boiled ..	Gall.	1,08,978	1,14,500	2 9 0	1 15 0
2. Oil, lubricating, castor ..	Cwt.	17,123	33,909	20 11 0	14 6 0
3. Piling sheet, steel	,,	17,955	18,027	10 5 0	7 12 0
4. Wire, G. I.	,,	44,139	46,477	10 10 0	8 11 0
5. Zinc tiles	,,	2,364	10,869	20 15 0	13 12 0
6. Pig iron	Ton	2,270	3,191	67 4 0	60 12 0

Though the reduction is chiefly due to a fall in the prices of raw materials and the general trade depression, standardization of qualities, bulking of demands and competitive buying were important contributory causes.

26. *Purchase of textiles and leather goods.*—The total value of orders placed during the year under this head amounted to Rs. 98,37,157, as against Rs. 1,13,36,292 during the year 1929-30. The purchases comprised :—

	1930-31.	1929-30.	Percentage of increase + or decrease —.
	Rs.	Rs.	Rs.
1. Cotton goods	53,93,784	58,32,556	—8
2. Woollen goods	36,57,331	42,16,245	—13
3. Jute, hemp and miscellaneous textile stores	7,13,641	12,60,390	—43
4. Leather goods	72,401	27,101	+167
Total—Textiles and leather ..	98,37,157	1,13,36,292	—13

The requirements of the Army in respect of textile stores have been steadily decreasing since the constitution of the Indian Stores Department. In the year 1922-23 the value of textile stores purchased for the Army amounted to Rs. 1,49,39,000, whereas in the year 1930-31 such purchases amounted to Rs. 34,94,000 only. This large decrease is attributable to a variety of causes, *viz.*, the actual diminution of requirements, fall in market prices, standardization of materials and competitive buying.

Among Civil departments of the Central Government, the purchases on behalf of the Director-General, Indian Medical Service, increased by Rs. 2,47,856, but the demands from the Posts and Telegraphs Department decreased by Rs. 2,88,212 and those from the Central Public Works Department by Rs. 1,89,282. The reduction in the former case is due to the postponement of the annual indent for uniform materials, which was received in the preceding February in the previous years, and in the latter case to the completion of the furnishing of the Viceroy's House and other Central buildings at New Delhi.

Among Railway Administrations, substantially larger demands were received from the North Western Railway, the South Indian Railway and the Burma Railways, resulting in an increase of Rs. 10,68,346, over the preceding year. There was, however, a heavy reduction in the demands from the other Railways, chiefly the East Indian Railway, and the total value of purchases effected on behalf of Railways remained Rs. 2,93,559 below the corresponding figure for the year 1929-30.

Mention has already been made in paragraph 24 of the reduction in the purchases on behalf of the Jail Department, Punjab, which is responsible for the decrease of Rs. 2,83,923, in the demands from that Province. The purchases for the Madras and Burma Governments, on the other hand, exceeded the corresponding figures of the previous year by Rs. 1,67,916 and Rs. 1,34,009 respectively and practically balanced the deficiency in the total value of purchases arranged for major Local Governments.

Appendix VI gives a comparison of the values and proportions of indigenous and imported textile stores purchased during the year and the three preceding years. Of the total value of textile stores purchased during the year 95 per cent. was either produced entirely in India from Indian material

or was manufactured in India from imported material. It will thus be seen that, as in the past, factories producing goods of Indian origin and manufacture succeeded in securing by far the largest share of the total business.

27. *Purchase of Engineering and miscellaneous stores.*—The total value of orders for the purchase of engineering, hardware and miscellaneous stores placed during the year amounted to Rs. 2,78,45,539 against Rs. 3,15,89,409, during the year 1929-30, a decrease of Rs. 37,43,870 (or 12 per cent.). As in the case of textile stores, the decrease was due to fall in prices as well as to a reduction in demands.

Several new authorities indented for engineering and miscellaneous stores for the first time, the most important among these being the Mercantile Marine Department and the Imperial Council of Agricultural Research, on whose behalf orders exceeding Rs. 2½ lakhs were placed during the year. The indents from the Quarter Master General's Branch, the Royal Indian Marine, the Posts and Telegraphs Department, the Central Public Works Department, the Meteorological Department, the Public Works Department in the Madras, Bombay, United Provinces, Bihar and Orissa, and North-West Frontier Provinces and the Madras and Southern Mahratta and Burma Railways increased by substantial amounts, the total increase aggregating Rs. 25 lakhs approximately.

On the other hand there was a fall, aggregating Rs. 66 lakhs, in the demands received from the Master General of Ordnance, the Military Engineer Services, the Security Printing Department, the Civil Aviation Department, the Forest and Marine Departments, Andamans, the Railway Administrations (except Madras and Southern Mahratta and Burma Railways), the Lloyd Barrage and Canals Construction Scheme, the Public Works Department, Baluchistan, Punjab, Central Provinces and Assam and the Indian States of Jaipur and Bahawalpur. The reduction in the demands from the Master General of Ordnance Branch is due to the withdrawal of the annual order for fuel oil and in those from the Military Engineer Services to a fall in their requirements of steel sections. In the year 1929-30 the Civil Aviation Department had placed orders for three hangars required at Karachi, New Delhi and Dum Dum, aggregating Rs. 3,02,887 in value; but only one hangar, at Mingaladon costing Rs. 1,18,043, was constructed during the present year. There was no demand from the Forest and Marine departments, Andamans, for sea-going craft for which orders aggregating Rs. 2,67,412 were placed during the preceding year. The decrease in purchases for Railway Administrations is due to curtailment of demands, reduction in prices of materials and the withdrawal by the Assam Bengal Railway of their annual requirements of Axle and Cylinder Oils. The reduction in the demands from the Lloyd Barrage and Canals Construction Scheme was due to the approaching completion of the project. The orders placed during the year 1929-30 on behalf of the Public Works Department in the Provinces mentioned and for the Jaipur and Bahawalpur Durbars included many items of a non-recurring character, *viz.*, pumping sets for Baluchistan, steel sections for the Punjab, hand tools for the Central Provinces, the Dawki suspension bridge for Assam and water supply and electrical stores for Jaipur and Bahawalpur States. There was also a marked reduction in the demands from the Security Printing Department which dropped from Rs. 82,483 to Rs. 20,467.

Amongst the orders for engineering plant and equipment placed during the year the purchases of motor cars for the Mechanical Transport section of the Indian Army Service Corps and Lighthouse equipment for the Mercantile Marine Department are deserving of special mention. The former comprised 126 motor cars costing Rs. 2,80,011 and the total value of the latter amounted to Rs. 2,13,929, including a tower lantern and first order optical apparatus for the Vengurla Rocks Lighthouse costing Rs. 1,47,220. Other important demands dealt with during the year deserving of special notice were for a ferry steamer for Burma Railways, amounting to Rs. 4,20,000, and for two steam tugs for Godavari river for the Public Works Department, Madras, amounting to Rs. 1,63,938.

The total value of important items of engineering and miscellaneous stores wholly or partially produced or manufactured in India for which contracts were placed during the year amounted approximately to Rs. 86,36,000. Details of these purchases will be found in paragraph 72.

28. *Distribution of purchases.*—The statistics given in appendix VII show the distribution of the orders placed by the Department among the various provinces and other territories during the year under review and three preceding years. It will be observed from these that the system followed by the Department in making purchases results in orders being widely distributed throughout the country.

29. *Details of important purchases.*—The more important purchases made during the year are specified below :—

Textiles.	Amount. Rs.
1. Cotton waste	17,33,000
2. Drill, khaki, coloured, white and grey	11,89,000
3. Serges, flannel, greatcoat cloths and broad cloth	11,35,000
4. Blankets, woollen	10,58,000
5. Yarns, woollen and cotton	4,42,000
6. Pugree cloth, muslin, nainsook, calico, etc.	3,46,000
7. Socks, woollen and cotton	3,31,000
8. Tents and components	2,79,000
9. Waistcoats, jerseys, cardigans and jackets	2,06,000
10. Bags, postal	2,02,000
11. Ropes, manilla, cordages and twine	1,78,000
12. Blanketting cloth	1,57,000
13. Sheets, hospital and barrack	1,47,000
14. Jhools and rugs	1,38,000
15. Wool cotton, absorbent, surgical	1,31,000
16. Canvas, cotton, flax, jute, etc.	1,21,000
17. Paulins, flax, jute and canvas	1,12,000
18. Durries, cotton and woollen	1,10,000
19. Garments, uniform	1,05,000
20. Caps and coats, waterproof	1,02,000
21. Putties, cotton and woollen	1,00,000
22. Gauze, absorbent, surgical	96,000
23. Hessians and gunnies	85,000

	Amount. Rs.
24. Overcoats, blanketting cloth, and greatcoats	80,000
25. Dosuties	72,000
26. Dhotie cloth and sheetings	64,000
27. Twill, cotton, khaki	60,000
28. Flannelette, mark III	58,000
29. Covers, waterproof	56,000
30. Tapes and webbing	52,000
Engineering and allied stores.	
31. Oil, Kerosene	19,09,500
32. Steel sections, sheets, flats and rounds	15,44,000
33. Cement	15,05,000
34. Electric lamps, fans and fittings	14,76,000
35. Oil, lubricating	13,43,000
36. Oil, fuel	11,73,000
37. Cables, electric	10,77,000
38. Road dressing material, asphalts, road tar, etc.	10,54,000
39. Electric generating and converting plant and prime movers	8,91,000
40. Oil, axle	8,81,000
41. Wire, copper	6,47,000
42. Steamers and other seagoing craft	5,99,000
43. Sluice gates	5,44,500
44. Paints and dry pigments	5,24,500
45. Pipes and fittings, Galvanized iron and mild steel	5,16,500
46. Oil, castor	5,12,000
47. Motor vehicles, trucks and spare parts	5,10,500
48. Steel structures	4,73,000
49. Pipes and specials, cast iron	4,61,000
50. Wire, galvanized iron, plain and barbed	4,54,000
51. Oil, linseed, raw and double-boiled	4,04,500
52. Pumping plant and equipment	3,52,000
53. Tanks, pressed steel and staging	3,09,500
54. Asbestos cement sheets	3,00,000
55. Petrol	2,80,000
56. Enamels and varnishes	2,52,000
57. Elements for primary cells	2,37,500
58. Steel huttings	2,29,000
59. Radio transmitting sets	2,28,000
60. Lighthouse equipment	2,14,000
61. Steel work for aeroplane hangars	2,01,094
62. Pig iron	1,94,500
63. Workshop machinery and tools	1,90,500
64. Miscellaneous engineering plant and spare parts of machinery	1,88,000
65. Sheets, corrugated, plain and galvanized	1,61,500
66. Zinc tiles	1,49,500
67. Insulators, porcelain	1,46,000

	Amount.
	Rs.
Engineering and allied stores—contd.	
68. Sheet steel, piling	1,40,000
69. Steel doors and windows	1,30,000
70. Engines, internal combustion	1,28,500
71. Turpentine, genuine and substitute	1,02,000
72. Electric distribution materials	95,000
73. Screws, nails, rivets, bolts and nuts	93,000
74. Acids and chemicals	90,500
75. Creosote	82,000
76. Poles, steel	79,500
77. Meters, electric	79,500
78. Road rollers	78,000
79. Meters, water	76,500
80. Hose pipe, canvas and rubber	73,500
81. Telephone and telegraph equipment	64,000
82. Timber in squares	64,000
83. Cooking ranges	57,700
84. Disinfecting fluid	55,000
85. Timber for packing cases	54,000
86. Cranes	52,000
87. Soap, soft and hard	50,000

30. *Running and Rate contracts.*—The system of Running and Rate contracts on an annual basis was extended during the year to several new classes of stores. Particulars of such contracts entered into during the year are given in appendix VIII. A list of the contracts in force or copies of those in which indenting authorities may be interested can be obtained on application to the Chief Controller of Stores or the purchase circle concerned.

The main advantages in these contracts are the bulking of demands and the facilities they place at the disposal of indenting officers, large and small, to obtain their supplies irrespective of the quantities required, at favourable rates and with the utmost expedition.

Provincial Purchase Circles.

31. *Work done by the Provincial Purchase Circles.*—The provincial purchase circles of the Department which are located at the principal ports of India, *viz.*, Calcutta, Bombay and Karachi, fulfil a most useful purpose by effecting purchases of comparatively small value which are best arranged by organisations located in close proximity to the sources of supply. They also assist the headquarters office in ascertaining local sources of supply and market prices, and in advising on applications from firms for registration.

The total value of orders placed by these organisations during the year under review amounted to Rs. 56,04,554 as against Rs. 52,41,971, in the previous year, or an increase of 7%. The number of indenting authorities which utilised the Circles increased from 642 to 722, the number of indents received from 8,681 to 11,169, and the number of orders placed from 18,912 to 19,883. In addition to the work represented by these figures, the organisations were required to deal with a number of larger indents, on behalf of the Headquarters

office. The services of the Provincial organisations were also utilised for the inspection of 181 firms which applied for registration as approved contractors and of which 136 were favourably reported on.

Fuller details of the work done by each organisation are described in the succeeding paragraphs. The statistics of orders placed and fees earned are given in appendix IV.

32. *The Calcutta Purchase Circle.*—A satisfactory expansion of business occurred in the Circle during the year under review. The number of indenting authorities increased from 353 to 398. The number of indents received increased from 4,416 to 6,073, the number of orders placed from 8,573 to 9,217 and their value from Rs. 22,32,656 to Rs. 25,75,700. These figures constitute the highest record since the creation of the Circle in the year 1924-25, in spite of the prevailing low level of market prices and a substantial reduction in the demands for petty items which indenting authorities have been advised to obtain direct as far as possible. The effect of the latter arrangement was noticed in the number of items dealt with by the circle which decreased from 19,687 to 18,855.

As in the previous year, there was a marked increase in the business handled on behalf of the Railway Administrations (Rs. 3,64,729 or over 100%) and the Posts and Telegraphs Department (Rs. 79,026 or 16%) and a further reduction (Rs. 2,23,285 or 31%), in the demands from the Army Department, particularly the Military Engineer Services. The Governments of Bihar and Orissa and Madras contributed additional business during the year amounting to Rs. 64,190 and Rs. 32,560 respectively.

To enable the Controller of Purchase, Calcutta Circle, to deal expeditiously with urgent demands from the Telegraph Department, his powers of receiving and dealing with indents direct without reference to the Headquarters office, which are ordinarily limited to Rs. 2,500, were raised to Rs. 15,000 in any one case.

Investigations were made regarding the capacity of 119 firms of which 34 were registered on the Headquarters lists and 55 were brought into the list of approved local suppliers maintained by the Circle.

33. *The Bombay Purchase Circle.*—The number of authorities which utilised the services of the Circle increased from 180 to 217. The number of indents and items dealt with increased from 2,051 and 8,024 to 2,644 and 10,355 respectively. The number of orders placed increased from 3,905 to 5,138 and their value from Rs. 9,89,423 to Rs. 15,60,137. Fortynine new indentors entrusted their purchases to the Circle. The value of orders placed on their behalf amounted to Rs. 21,355.

The Royal Indian Marine and the Military Engineer Services continued to be the principal departments utilising the services of this Circle. The demands from these departments contributed to the increase in the business of the Circle to the extent of Rs. 2,07,330 and Rs. 43,213 and amounted to Rs. 4,69,111 and Rs. 4,26,809 respectively. The purchases on behalf of the Royal Indian Marine included a special demand for ships plates and mild steel angles amounting to Rs. 89,000 which was dealt with by the Circle by special arrangement. The demands from the Provincial Governments, chiefly Bombay,

increased by Rs. 2,17,961, from Civil departments of the Central Government by Rs. 77,790 and from Railway Administrations by Rs. 33,436.

Fifty firms were inspected during the year of which 42 were recommended for registration.

34. *The Karachi Purchase Circle.*—Unlike the Calcutta and Bombay Circles, a heavy set back was experienced in this Circle during the year and the progress made during the preceding year was not maintained. The number of indenting authorities decreased from 109 to 107, but there was a far greater reduction in the volume of business dealt with. The number of indents received increased from 2,214 to 2,452, but they comprised 12,923 items only as against 16,737 during the preceding year. The number of orders placed decreased from 6,434 to 5,528 and their value from Rs. 20,19,892 to Rs. 14,68,717. The fall in the business entrusted to the Circle may be attributed to some extent to the transfer of demands to the market of Bombay, but it was mainly due to the natural reduction in the demands from the Lloyd Barrage and Canals Construction Scheme, which declined by Rs. 1,62,000, and further to the fact that the figures for the preceding year included a special demand for 1,100 tons of mild steel sections costing Rs. 1,79,000, from the Punjab Public Works Department, to which reference was made in paragraph 27 of the last report. The general financial stringency and the downward trend of prices were other contributory causes. As examples of the fall in prices, it may be noted that the rates of mild steel sections and corrugated and plain sheets, which constitute principal items of stores handled in this Circle, were lower than those prevailing in the preceding year by 12 to 15% and 7 to 8% respectively.

The authorities of the Military Engineer Services and the Lloyd Barrage and Canals Construction Scheme continued to be the principal indentors on the Circle. The value of stores purchased for these authorities amounted to Rs. 7,51,222 and Rs. 3,73,336 respectively, out of a total turnover of Rs. 14,68,717. The Punjab Public Works Department, including the Sutlej Valley Project and the Hydro Electric Branch, placed orders of the value of Rs. 1,83,220 and the Public Works Department, Bombay, of Rs. 77,800.

Twelve firms were reported on by the Circle of which five were recommended for registration as approved contractors.

35. *Comparison with the London Store Department.*—Appendix IX furnishes a comparison of the numbers of contracts for stores and freight placed by the India Store Department, London, and the expenditure incurred thereon, with the numbers and values of the contracts entered into by the Indian Stores Department during the years 1927-28 to 1929-30. In appendix X a comparison has been made between the values of contracts placed by the two organisations for various departments during the same period. The figures relating to the London Stores Department have been converted into Indian currency at the rate of 1*s.* 6*d.* to the rupee.

The figures of the London Stores Department for the year 1930-31 are not yet available.

CHAPTER IV.

WORK OF THE INSPECTION BRANCH.

36. *General.*—The staff of the Inspection branch is employed on the preparation and revision of specifications and Schedules of Requirements, technical scrutiny of engineering schemes, preparation and scrutiny of specifications for other Government departments and standardisation of materials. Besides supervising the work of the Provincial Inspection Circles, the Government Test Houses and the Metallurgical Inspectorate, the Inspection branch is exploring possible means of developing Indian industries.

37. *Arrangements for inspection of materials in the country of origin.*—The services of the India Store Department, London, were utilised, as in the past, for the inspection of plant and machinery manufactured abroad and component parts or raw materials imported for use on work fabricated in India, though to a smaller extent than during the preceding year. The reduction is due to the arrangement made with the Railway Administrations under which demands for inspection in the country of origin are sent direct to the Director General, India Store Department, London, in all cases in which inspection by the Indian Stores Department is not required on arrival of the materials in India, and to the rigid scrutiny exercised by the Inspectorates on the importation of component parts or materials. The total value of stores inspected in the countries of origin before despatch amounted to Rs. 1,00,00,000 approximately.

The arrangement for the pre-inspection of materials referred to in paragraph 31 of the Report for the year 1929-30, which was sanctioned for one year in the first instance, was extended for a further similar period. Requisitions for the inspection of steel springs, mild steel sections, chrome steel rails, rolling stock and permanent way components, miscellaneous castings, etc., were forwarded to the Director General, India Store Department, under this arrangement.

38. *Specifications.*—During the year 48 new specifications were framed and 93 specifications were revised. A list of the specifications which were current at the end of the year 1930-31 will be found in appendix XI. In addition to these, 58 specifications were either scrutinised or drafted by the Department for the Standing Committee on Standards and Specifications for Indian Railways.

39. *Schedules of Requirements.*—One hundred and twentyone Schedules of Requirements were framed during the year and seven were revised. Some of the more important of these are detailed below :—

1. Tower lantern and first order optical apparatus for the Vengurla Rocks Lighthouse (Bombay District).
2. Two river steamers for towing purposes for the Public Works Department, Madras.
3. Seagoing steam launch for the Chief Forest Officer, Port Blair.
4. Water softening plant for the Public Works Department, Dehra Dun.
5. A 25 K. W. oil engine generating set for Military Engineer Services, Landi Kotal.

6. Electric generating plant for Mir Ali Cantonment.
7. Oil engine generating plant for Military Engineer Services, Wana.
8. Motor launch for Military Engineer Services, Northern Command.
9. Centrifugal pumping plant E. H. T. transformer and switchgear for Military Engineer Services, Ahmadnagar.
10. Ordnance steel hutting for Military Engineer Services, Peshawar, Kohat and Bannu.
11. Alternating current punkha motor sets, reduction gears and control panels for Military Engineer Services, Bombay.
12. Fire alarm equipment for the Imperial Institute of Agricultural Research, Pusa.
13. Pneumatic sewage ejector plant for Military Engineer Services, Ishapore.
14. Oil engine driven pumping sets, overhead cranes, filter plant, and other accessories for the Rajahmundri Water Supply Scheme, Madras.
15. Gates for regulators, for Karachi Canal Division.
16. Vacuum brake fittings for Railways.
17. Motor launch engine for Godavari Headworks Division, Doulaishwaram.
18. A 500 K. W. 6 phase rotary converter (or motor converters) starting panel, etc., for Central Public Works Department, New Delhi.
19. Special beacons, flood lights and special Aerodrome lighting for the Karachi-Delhi Air Route (India).

40. *Technical investigations and advisory work.*—Complaints were received from two consuming Departments regarding a white lead product of Indian manufacture. It was stated that it did not give the same service for certain requirements as the imported material. A complaint was also received regarding the failure in service of a brand of lubricating oil supplied to a Railway Administration. A senior technical officer of the Department was placed on special duty to investigate these complaints. Certain valuable technical information became available as a result of the investigations and it has been placed at the disposal of the parties concerned. The opportunity was also taken to investigate the possibilities of utilising certain indigenous mineral lubricating oils in place of those at present imported from abroad. As a result of the investigation modifications have been made in the Department's specifications relating to lubricating oils in order to permit the supply of indigenous oil to using Departments.

Twentytwo engineering schemes framed by various departments were examined during the year resulting in orders to the aggregate value of Rs. 17,39,587. Fortyfour enquiries were received from various indenting officers asking for technical advice or other particulars and the information or advice asked for was furnished to them. The Department was also asked to value a complete power station plant, the original cost of which amounted to Rs. 6¾ lakhs. A technical officer of the Department was deputed to inspect the

plant in question and to submit a valuation report thereon. The information required by the prospective purchaser was duly furnished.

41. *Erection at site orders.*—Fortytwo orders of this class were dealt with during the year to the value of Rs. 24,33,368.

42. *Standardisation.*—Considerable work has been done by the Department in the direction of standardisation of materials. The work done in the collection of data for a pamphlet on tent specifications, which will be issued shortly, may be mentioned as an instance. It had been noticed from the demands, received that in several instances the requirements were merely based on the supplies obtained in the past and that various standards existed in regard to tents and tent components required by individual officers and departments, both in regard to the material and to the types and sizes. The advantages of purchasing to a definite standard are many, notably improvement in quality and quicker supplies. The pamphlet referred to has for its object reduction of not only the types of tents required by civil indentors but also standardisation in respect of size or sizes of each type.

43. *Sample Room.*—This section of the Inspection branch at Headquarters dealt with over 13,000 samples during the year under review.

44. *Technical publications issued.*—The following publications were is sued during the year :—

(1) A pamphlet entitled "A comparison between the physical properties of rails produced by the Open Hearth and Duplex processes". This pamphlet, as its title implies, embodies the results obtained on rails produced by the Open Hearth and Duplex processes. For some time a prejudice, real or imaginary, existed against rails rolled from Duplex steel which were stated to compare unfavourably with those produced by the Open Hearth process ; further it was alleged that rails rolled with a "wash heat", *i.e.*, from reheated blooms, were inferior to those rolled direct from ingots. The results obtained from this investigation, which was effected with the co-operation of the Tata Iron and Steel Company, should serve to show the fallacy of such prejudices. Particulars of selected "casts" together with exhaustive tensile and drop test figures are given in the pamphlet.

(2) A hand book on "Heavy Oil Engines, Classification, Origin and Development". During the last few years, as a result of great progress made in its design and operating characteristics, the heavy oil engine has been more extensively used, for many purposes, than hitherto. The book aims at describing, in brief, the classification, origin and development of heavy oil engines and indicating the directions in which future progress may be expected from the point of view of the buyer and the engineer concerned with the purchase and inspection of such engines.

In addition to the above new publications, the following two pamphlets were revised :—

(1) Instructions for taking and sending samples to the Government Test House.

(2) Specifications for oils and lubricants.

A complete list of the important publications issued by the Department is given on the reverse of the title page.

Provincial Inspection Circles.

45. *Work done by the Provincial Inspection Circles.*—The total amount of stores passed by the Provincial Inspectorates during the year and charged on value aggregated Rs. 6,50,95,835 and the tonnage of material charged on weight amounted to 40,807 as against Rs. 7,34,37,369 and 48,828 tons during the preceding year. The value of stores inspected against the orders placed by the Department increased by Rs. 34,42,786, namely from Rs. 3,25,76,778 to Rs. 3,60,19,564, but that of orders placed by other authorities the inspection of which was entrusted to the Department, declined by Rs. 1,17,84,320 and tons 8,021, that is, from Rs. 4,08,60,591 to Rs. 2,90,76,271 and tons 48,828 to 40,807. The fall was due to a heavy reduction in the work inspected on behalf of Railway Administrations, which declined in the aggregate from Rs. 4,05,05,822 to Rs. 2,85,52,089 and from tons 44,405 to 34,374.

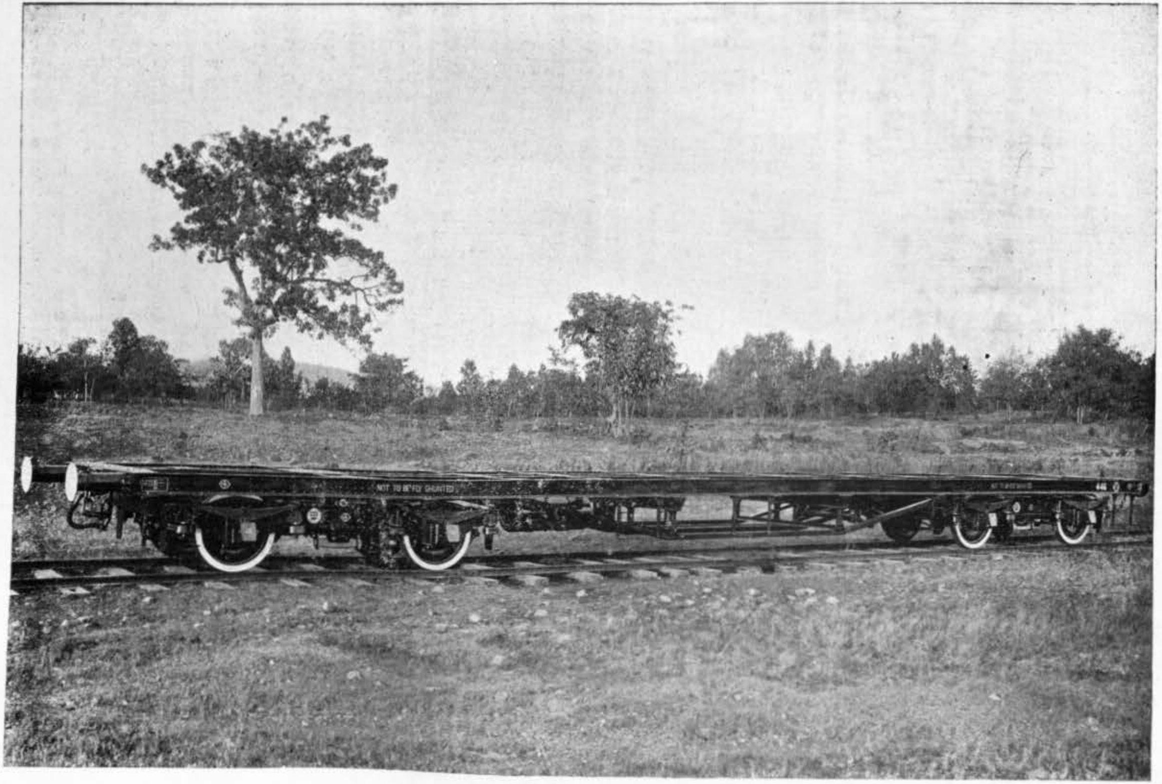
As explained in paragraphs 37 and 38 of the Report for the year 1929-30, the figures of work done during that year were exaggerated by the accumulations caused by the labour troubles during the preceding year. The decline during the year under review is, therefore, more apparent than real. In spite of the general reduction in prices the value of stores inspected during the year exceeded the highest record previous to 1929-30. There was a substantial increase in the volume of work inspected on behalf of Provincial Governments (from Rs. 1,64,248 to Rs. 2,47,054), public bodies (from Rs. 1,55,911 to Rs. 1,91,866) and private concerns and Indian States (from Rs. 12,702 to Rs. 72,694).

Full details of the work done and fees earned by the various inspection organisations are given in appendices XII, XIII and XIV.

46. *The Calcutta Inspection Circle.*—There was a further marked increase in the total number and value of orders received for inspection in this Circle. The number of orders received for inspection rose by 31%, from 12,222 to 15,970, and their value by 44%, from Rs. 3,17,06,406 to Rs. 4,57,97,992.

The value of stores inspected against orders placed by the Department rose from Rs. 1,11,68,984 to Rs. 1,26,65,834, but there was a decline in the value of orders placed by other authorities the inspection of which was entrusted to the Department. The value of the orders of the latter class fell by Rs. 73,13,976 (from Rs. 3,21,46,936 to Rs. 2,48,32,960). This was chiefly due to the clearance during the year 1929-30 of the heavy carry over from the preceding year already referred to.

The Railway Administrations continued to utilise the services of the Circle to the greatest extent and the work inspected on their behalf (Rs. 2,43,55,872 and tons 33,907) amounted to 65% of the total stores charged on value and 84% of those charged on weight. These figures show a decline over the preceding year, for the reasons already explained, but there was a substantial increase in the value of orders received from these authorities during the year, which principally contributed to the increase of 44% mentioned above. The number of wagons and underframes ordered for inspection rose from 2,626 to 4,528 and the number of plate sleepers from 739 to 4,23,800. The number completed and passed against the former was 3,961 and against the latter 4,02,536. An illustration of a Bogie carriage underframe constructed at



A Bogie Carriage Underframe constructed at the East Indian Railway Workshops, Tatanagar.
(*Vide* paragraph 46.)

the East Indian Railway Workshops at Tatanagar, under the inspection of the Indian Stores Department, faces this page.

The next place was taken, as in the past, by the work connected with the contracts placed by the Indian Stores Department itself, which amounted to 34 per cent. of the work handled by the Circle.

The orders from Provincial Governments show a marked increase (from Rs. 1,64,248 to Rs. 2,15,054) and maintained the third place in the order of magnitude. Appreciable improvement was also recorded in the quantities of work inspected on behalf of public bodies, private concerns and Indian States.

The orders which principally contributed to these increases were :—

	Rs.
I. *Provincial Governments*—	
(*a*) Public Works Department, Assam, orders for bridges ..	1,82,922
(*b*) Stores Purchase Committee, U. P., order for Koh river bridge	28,350
II. *Public Bodies*—	
(*a*) Chief Engineer, Madras Corporation, order for stoneware pipes	1,54,531
(*b*) Karachi Port Trust order for points and crossings ...	25,156
III. *Private parties and Indian States*—	
(*a*) Stores Purchase Committee, Bangalore, order for structural work and dogspikes	25,073
(*b*) Burn and Company, Calcutta, order for stoneware pipes ..	18,555

Among the orders placed by the Indian Stores Department and inspected by this Circle may be mentioned the Aeroplane Hangar, Mingaladon, Burma, the total cost of which amounted to Rs. 1,18,043.

The following are some of the important non-departmental orders received for inspection during the year :—

	Rs.
(1) Railway Board's and other orders for 4,528 wagons and underframes	1,69,18,985
(2) Burma Railways order for Irrawadi bridge	27,03,183
(3) Railway Board's orders for plate sleepers for Eastern Bengal, East Indian and Great Indian Peninsula Railways	17,77,964
(4) Bengal Nagpur Railway orders for steel sleepers ..	14,36,875
(5) North Western Railway order for Kotri bridge	6,55,725
(6) Bengal Nagpur Railway order for 20 spans of 100 ft. girders	3,28,480
(7) Bengal Nagpur Railway orders for plate sleepers.. ...	3,12,056
(8) Bengal Nagpur Railway order for material and falsework for Rupnarain bridge	2,16,669
(9) North Western Railway order for Kalabagh bridge ..	1,57,616
(10) Madras and Southern Mahratta Railway orders for pot sleepers	1,23,115
(11) North Western Railway order for plate girder spans ..	1,21,405
(12) Calcutta Chord Railway order for assorted spans for Bally bridge	86,699

Two orders of special interest inspected during the year were for the manufacture of—

(1) Two service spans, 160′, fitted out completely with machined bolts, all holes drilled and reamered ; and

(2) Fortysix welded steel petrol and oil tanks for tank wagons for Railways.

These are believed to be the first contracts of their kinds undertaken in India.

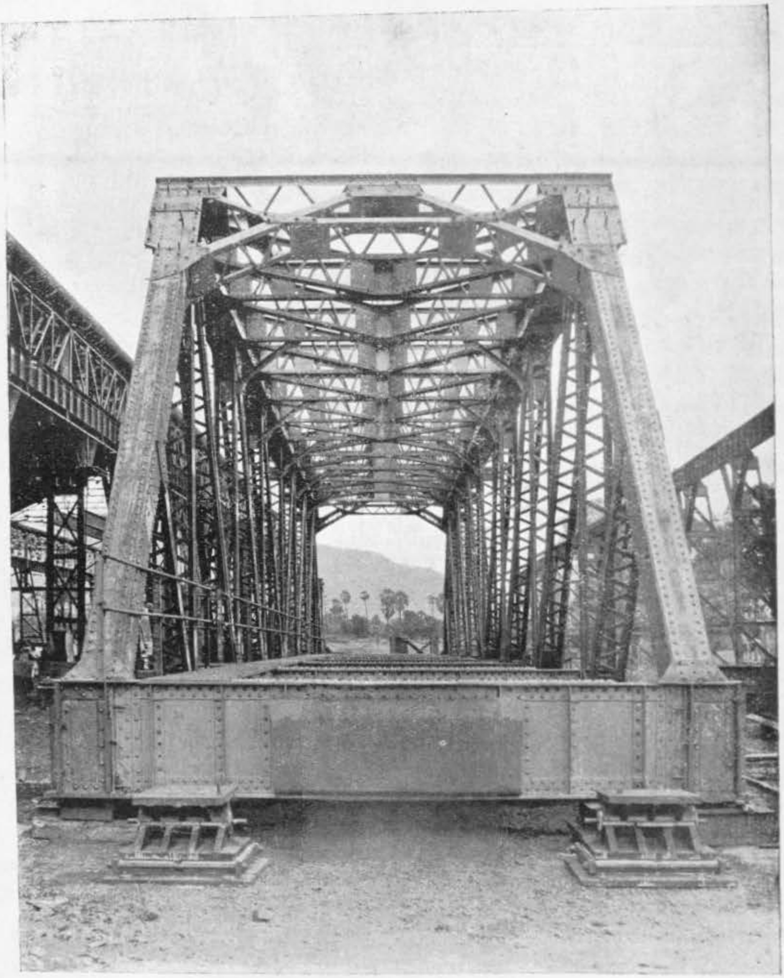
During the year under review 41 firms were reported on of which 26 were recommended for registration as approved contractors.

47. *The Bombay Inspection Circle.*—The bulk of the work in this Circle relates to the inspection of orders placed by the Department itself, and the number of such orders received for inspection rose from 6,052 to 8,670. The amount of work inspected against these orders increased by 7 per cent. from Rs. 78,85,779 to Rs. 84,75,293, and represented 75 per cent. of the total work inspected during the year. The number of demands received for inspection from other authorities decreased from 794 to 287. The value of work inspected against these orders decreased from Rs. 53,10,244 to Rs. 27,74,698 but there was some increase in the tonnage of material charged on weight which rose from 80 to 193. The decrease in value is due to the fact that no large orders were received during the year for inspection from any of the Railway Administrations utilising the services of the Inspectorate. This is attributed to the general economic conditions and to the arrangement referred to in paragraph 37 under which the Railway Administrations addressed their demands for inspections in the country of origin direct to the Director General, India Store Department, London, in cases in which inspection by the Indian Stores Department was not required on arrival of the materials in India. It was also decided during the year to discontinue the inspection of orders of less than Rs. 100 in value, except in cases in which such inspection was considered to be essential. This decision reduced to some extent the aggregate value of the turnover for the year, but as the cost of such inspections is neither commensurate with the inspection fees earned nor with the ultimate advantage to the indenting departments, the reduction due to this cause is not expected to have affected the financial position of the Department adversely.

The following orders of importance were received for inspection during the year :—

	Rs.
(1) Great Indian Peninsula Railway order for nine 106 ft. spans, six 80 ft. spans and one service span	2,91,000
(2) North Western Railway order for coaching stock body fittings	47,063
(3) Military Engineer Services, Kohat, order for pressed steel tank, 60,000 gallons capacity, on staging 32 ft. high, complete with roofing. The whole of the staging and roof to be of welded construction, no rivets or bolts being used ..	24,747

The inspection of Railway points and crossings continued to receive special attention. An order for crossings manufactured from chrome steel rails, amounting to Rs. 26,576, was complied with satisfactorily by a local firm which received advice from the Inspectorate continuously as to the equipment required and methods of manufacture. Another firm was entrusted with



Steelwork for Nerbudda Bridge, Great Indian Peninsula Railway.
(*Vide* paragraph 47.)

orders for crossings, manufactured from carbon steel rails, amounting to Rs. 96,278, and for cast iron chairs, amounting to Rs. 54,406.

A contract deserving of special mention among those dealt with during the year was that for the Nerbudda bridge consisting of eighteen spans of 156′6″ each for the Great Indian Peninsula Railway. An illustration of the steelwork for the bridge, which was fabricated in India, under the inspection of the Circle, faces this page. Among the smaller orders dealt with during the year, those for the supply of electric light fittings of local manufacture are deserving of special mention. The fittings were the first of their type to be manufactured by the firms and it is satisfactory to record that a high standard of finish and workmanship was attained.

Five orders for steelwork and machinery including inspection and test after erection at site were dealt with during the year. Fourteen firms were reported on of which twelve were recommended for registration as approved contractors.

48. *The Government Test House, Bombay.*—The Test House continued to be attached to the Bombay Inspection Circle. The number of tests undertaken during the year increased from 553 to 561, of which 354 related to the Physical section, 185 to the Chemical section and 22 to the Oil section. The organisation is mainly used for departmental work, but there was a small increase in the work received from other authorities, the number of samples tested on their behalf having risen from 10 during the year 1929-30 to 29 during the year under review.

The work of measuring the effects of direct sunlight on dyed fabrics in terms of Lovibond Tintometer numbers, which was started during the preceding year, was continued. In addition to this, experimental data regarding fastness of dyes on fabrics to various other tests have been collected which will be useful in fixing the standards of fastness.

Investigations and tests were also carried out during the year to determine the effect of varying humidities on the breaking strength of woollen yarns and fabrics. The testing of fuel and lubricating oils was undertaken for the first time and an oxygen testing apparatus was added to the equipment.

As in the past, the major portion of the work done was connected with the testing of textile materials. A complete list of the articles tested during the year will be found in appendix XVII and details of the work done and fees earned will be found in appendices XII and XV.

49. *The Karachi Inspection Circle.*—The number of orders received by this organisation during the year aggregated 7,486 as against 7,925 during the year 1929-30. The value of stores inspected during the year amounted to Rs. 79,39,758 as against Rs. 90,06,402 during the preceding year. There was an increase of 16 per cent. (from Rs. 56,35,886 to Rs. 65,47,995) in the value of stores inspected against orders placed by the Department, but it was more than set off by a heavy decline in the value of non-departmental orders which amounted to Rs. 13,91,763 only against Rs. 33,70,516 during the preceding year. The tonnage of materials inspected on behalf of those authorities on weight also declined from 4,600 to 274.

The reduction in the calls for inspection against orders placed by other authorities is almost entirely due to the withdrawal of inspection work from the Circle by the North Western Railway Administration, except for materials fabricated locally.

Hardware and miscellaneous engineering stores formed the bulk of the material inspected by this organisation, chiefly steel sections, pipes and fittings, electrical materials, oils and paints and metals. Orders, both departmental and non-departmental, for locally fabricated steelwork, amounting to six lakhs of rupees approximately, were inspected during the year. Important among these were :—

	Rs.
(1) Steel huttings for Ordnance Depots	2,39,034
(2) Steel Work for Aeroplane Hangar at Risalpore	81,882

This work was inspected on behalf of the Upper India Circle and is included in the statement of work done by that Circle.

	Rs.
(3) Welded Petrol Tanks for Military Engineer Services ..	78,232
(4) Sliding Sluice Gates for the Lloyd Barrage and Canals Construction Scheme	67,076
(5) Steel bridge work for the Jodhpur and North Western Railways	59,803
(6) Steel motor launch for Military Engineer Services ..	14,035
(7) Steel work for garage roofing for Military Engineer Services	12,971

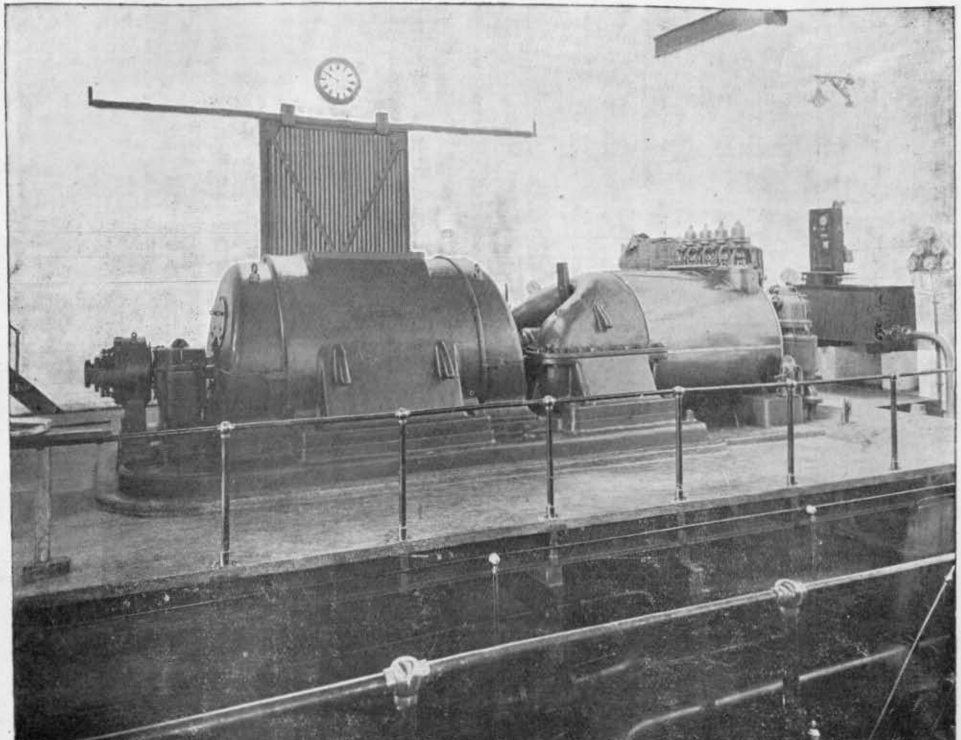
Six orders for plant and machinery, including inspection and test after erection at site, were dealt with.

50. *The Upper India Circle and the Cawnpore Branch.*—As the Cawnpore Inspectorate was constituted as an independent inspection branch only in October 1929, the work done by these organisations was shown together in the Report for the year 1929-30. It is, therefore, necessary to combine the statistics of the two organisations for the purpose of comparison with the work done during the preceding year.

The number of calls for inspection received in the two Inspectorates amounted to 2,572 and the value of stores inspected amounted to Rs. 75,66,266, against 2,514 and Rs. 71,14,958 respectively. Further details are given in the following paragraphs.

51. *The Upper India Circle.*—The Upper India Circle received 1,198 calls for inspection and inspected stores to the value of Rs. 51,09,146 during the year.

The most important class of work undertaken by this Circle is the inspection of plant and machinery. Sixtyfive orders including the inspection and test of plant or structures after erection at site were dealt with during the year. Special mention may be made of a contract for a 3000 K. W. Turbo-alternator set for the Central Public Works Department, New Delhi, an illustration of which faces this page. The plant was purchased, inspected and tested after erection at site by the Department.



A 3,000 K. W. Turbo-alternator set for the Power House, New Delhi.

(*Vide* paragraph 51.)

Other important orders dealt with during the year were :—

	Rs.
(1) A 500 K. W. Diesel driven Alternator Set and Switch gear for Jaipur State	2,02,265
(2) Sectional steel tanks for the Military Engineer Services, Rawalpindi, Lahore and Sialkot	1,22,820
(3) Pumping sets for Lahore, Sheikhupura, Sargodha, Ferozepore and New Delhi	89,625
(4) Electrical equipment for Ferozepore Arsenal	46,508
(5) Universal Calendar and Bowls for the Director of Industries, Punjab	25,640

Fifty firms were reported on during the year of which eighteen were recommended for registration as approved contractors.

52. *The Cawnpore Inspection Branch.*—This Branch received 1,374 calls for inspection and inspected stores to the value of Rs. 24,57,120 during the year. As it deals principally in the textile and leather goods, the figures of outturn were appreciably affected by the general fall in prices. The chief items of work dealt with during the year were :—

1. Cotton waste.
2. Uniforms for the staff of the East Indian Railway.
3. Tents and tent materials.
4. Cotton yarn.
5. Woollen materials.
6. Leather goods.

A number of inspections were carried out on behalf of other departments among which may be mentioned tents for Palestine Government and axle guards for the Eastern Bengal Railway.

Forty firms were reported on during the year of which 26 were recommended for registration as approved contractors.

53. *The Madras Inspection Branch.*—This inspectorate is chiefly employed on the inspection of textile and leather goods against orders placed by the Department itself. The value of such stores inspected during the year amounted to Rs. 6,32,706. In addition, engineering, hardware and miscellaneous stores amounting to Rs. 2,08,320 were inspected. The number of calls for inspection received, increased from 444 to 605 and the total value of stores inspected amounted to Rs. 8,41,026 against Rs. 8,04,066 during the preceding year. Though these figures indicate an increase of about 5% only over the previous year, the volume of work which passed through the Inspectorate was appreciably greater than that during the year 1929-30. Fourteen firms were inspected during the year of which eleven were recommended for registration as approved contractors.

CHAPTER V.

The Metallurgical Inspectorate, Tatanagar.

54. *Work done.*—The total value of materials of various descriptions handled during the year, namely, rails, fishplates, structural steel, shell bars, black sheets, sleepers and keys, cables, ammonium sulphate, etc., amounted to Rs. 465 lakhs. Full details of the work done on behalf of the various authorities during the year compared with the three preceding years are given in appendices XII to XV.

The total demand of approximately 90,460 tons, of rails from the Railway Board for the year, was fully complied with and the Tata Iron and Steel Company were allowed to supply 26,500 tons of rails in advance out of the requirements for the year 1931-32. In spite of this fact, however, there was a small decline in the tonnage of iron and steel inspected during the year, which fell from 294,281 to 287,206 tons. This was entirely due to a diminution of demands. A substantial increase was recorded, on the other hand, in the quantity of cables manufactured by the Indian Cable Company and passed by the Inspectorate as well as in the numbers of tests and analyses carried out during the year. The fees earned by the Inspectorate thus almost approached the level of the preceding year, in spite of the general trade depression and fall in prices of materials.

No orders for pressed steel sleepers were received during the year, but the Railway Board arranged to place orders with the Tata Iron and Steel Company for chrome steel rails for points and crossings. These rails are required to comply to more rigid tests than those applied to ordinary carbon steel rails, but the Company successfully produced 1,280 tons of chrome rails during the year.

The Ishapore Rifle Factory placed an order for shell bar with the Tata Iron and Steel Company. The manufacture and rolling of the bar were supervised by the Metallurgical Inspector, who finally passed the consignment after a very rigid inspection.

Twenty thousand six hundred and twentytwo coils, or 20,64,032 yards of cable, valued at over three lakhs of rupees, were tested and certified on behalf of the Indian Cable Company, as against 12,834 coils, or 12,75,765 yards, during the year 1929-30. In addition, supplies inspected against orders placed by the Department, amounted to Rs. 8¾ lakhs approximately, making a total of Rs. 11,83,236, as against Rs. 10,62,940 during the previous year.

55. *Tests and estimations.*—The number of special tests carried out at the Inspectorate rose from 5,292 to 7,067, exceeding the highest previous record by over 27%. Following the reduction in the tonnage of material inspected, the number of estimations of carbon, silicon, manganese, sulphur, phosphorus and other elements declined from 30,880 to 25,001 and of routine physical tests from 50,623 to 45,507.

Seven thousand seven hundred and fifty bags of ammonium sulphate, of the value of Rs. 9 lakhs, were tested during the year. For the reasons explained previously, the number of samples of ammonium sulphate taken and analysed during the year fell from 47 to 42 and their weight from 6,073 to 5,900 tons

56. *Investigations.*—Eighty-eight investigations were undertaken during the year, compared with 93 during the preceding year. Altogether 729 tests and analyses were carried out on these investigations, yielding a revenue of Rs. 4,920.

The services of the Inspectorate were requisitioned by the Controller of Printing and Stationery (India) in the investigation of a rustless steel galley. An investigation was also carried out on " Arrow Brand " steel supplied to the Bengal Nagpur Railway.

An investigation into the effect of tropical conditions on rubber insulated cables is being carried out by the Inspectorate. Samples of cables manufactured by the Indian Cable Company have been subjected to periodic tests for over eighteen months. It is proposed to continue these tests for some considerable period and the results of the experiments are expected to prove of considerable value.

57. *Buildings.*—The additional residential bungalow started during the year 1929-30 was completed and occupied in May 1930.

58. *Inspection and testing equipment.*—The following apparatus was added to the laboratories of the Inspectorate :—

1. Band saw.
2. Vickers diamond hardness tester.

The Inspectorate is staffed and fully equipped to undertake the examination of all classes and grades of ferrous and non-ferrous metals and also investigation into the behaviour or failure of such materials in actual service.

The services of the Inspectorate can be utilised by all Government Departments, State and Company Railways, Public bodies, Indian States and private concerns. No charges are made for its services to non-commercial civil departments of the Central Government. The fees chargeable for work done for other authorities are given in the schedules mentioned in appendix I, paragraph 29. They can also be ascertained on application to the Metallurgical Inspector, Burma Mines, Tatanagar.

CHAPTER VI.

The Government Test House, Calcutta.

59. *General.*—The work of the Government Test House has not escaped the influence of the general trade depression, and the revenue-earning work and the revenues of the establishment have both been affected thereby, though not to the extent that at one period seemed probable.

The number of samples received per month has always varied considerably. Although the number of samples tested per month fell below 500 in August, September and October, there was a marked recovery during the remaining months of the year. Eight thousand six hundred and twentyeight samples were tested during the year, as compared with 8,428 during 1929-30. In the case of a considerable number of samples, however, simple or partial tests only were required by the parties concerned and the revenue earned was consequently lower than that in the past years. A comparison of the work done during the year with the record of the three preceding years is shown in appendices XII and XV and a list of the materials tested during the year is given in appendix XVI.

There was an increase in the work carried out for Provincial Governments, public bodies and private concerns, though the revenue derived from the last named source was practically the same as during the year 1929-30. On the other hand, the work done on behalf of the Military Department, State and Company worked Railways and other Central Government departments, declined, due presumably to reduction of expenditure on technical stores.

60. *Physical Section.*—During the year the Physical Section carried out tests on 4,736 samples, as compared with 3,929 samples during 1929-30. Of this total, 1,755 samples were tested for the Indian Stores Department, 386 for Provincial Governments, 119 for Indian States, and 1,325 for private concerns, as compared with 1,502, 242, 20, and 659 respectively, for the same parties during 1929-30.

The Electrical sub-section, which is expanding rapidly, carried out tests on 608 samples as against 295 samples during the previous year, a considerable proportion of the work comprising the testing of ceiling fans and electric cables on behalf of private firms. The number of textile samples tested increased to 1,529 as compared with 981 during 1929-30. These figures, however, are not strictly comparable as a considerable number of the samples received during the year were sent for simple tests only ; nevertheless the work of the Textiles sub-section is steadily increasing and this branch of the Physical section is now being utilised to an increasing extent by private parties and firms.

61. *Chemical Section.*—The number of samples reported upon by the Chemical Section, including the Oil sub-section, was 3,892 as against 4,499 during the previous year, the declines being evenly shared by the Chemical and Oil laboratories. There was a reduction in the number of samples tested for the Department itself, the Military Department, the State and Company-worked Railways, and other Central Government departments. On the other hand, the amount of work done on behalf of private concerns was well maintained in spite of trade depression.

The work in connection with the testing of samples of coal for the Coal Grading Board is declining, owing to the grading of seams nearing completion, but the decline is being partially off-set by an increase in the number of coal samples received for test on behalf of collieries and other private parties. The total number of samples of this class handled during the year amounted to 311 against 437 in the preceding year.

The arrangement with the Director of Contracts, whereby the Government Test House undertook the testing of benzol supplies at the Bararee Coke Works, Kusunda, was extended during the year to cover also supplies from the East Indian Railway Colliery at Giridih. Under this arrangement a chemical assistant is deputed to carry out sampling, testing and sealing of tank wagons or other containers at works, as soon as intimation is received that despatches against indents are pending.

62. *Standardization of Oils, Paints, Varnishes, etc.*—The numbers of samples of paints and varnishes, and also of lubricating oils, are steadily decreasing, due to the operation of the standard samples schemes in the case of these materials. The total numbers of samples dealt with during the year under review and the two preceding years were 707, 920 and 1,245 respectively.

The number of standard samples of paints and painting materials registered up to the end of the period under review was 1,709. Of these 1,348 have been tested and reported upon, and special attention is being given to the completion of the work on the remainder.

Special investigations, comprising the determination of viscosity curves, carbon residues, hard and soft asphalt contents, saponification and acid values, ash contents, and co-efficients of static friction were carried out in the case of 112 standard samples of lubricating oils.

63. *Practical tests on Paints, Varnishes, etc.*—The exposure tests on panels prepared in previous years have been continued. Twentynine further samples of paints, 6 samples of body varnishes, and a sample of lanoline rust preventive preparation, together with a sample of mineral jelly for comparison, were exposed on test-panels.

Private concerns continued to utilise the available facilities for exposure tests, and 13 such tests were undertaken during the year.

Arrangements have been completed for the erection of a steel sheet test-panel having a superficial area of 100 sq. ft. for the purpose of carrying out tests of the spreading capacity of paints. The need for this has been evident for some time and its installation will enable tests to determine this important property of paints to be carried out on a practical scale.

64. *Special investigations.*—This year has been noteworthy as regards the number of important cases which have arisen in connection with qualities, standards, and specifications of lubicating oils. Besides the special investigations referred to in Chapter IV, paragraph 40, the following investigations were carried out by the staff of the Test House :—

(1) Investigation of the characteristics of certain typical lubricating oils, in connection with proposed modifications of the Army Department specifications.

(2) Suitability of "ageing tests" for crank chamber oils.

(3) Characteristics of lubricating oils after varying periods of use.

(4) Efficiency of soap and soda produced in India in comparison with imported materials for the cleaning of coinage blanks at His Majesty's Mint.

(5) Effects of variation of atmospheric humidity and temperature on the properties of cotton fabrics of various types and weights.

(6) Revision of existing and drafting of new I. S. D. specifications for :—

(*a*) Candles, wax, long and carriage.

(*b*) Sulphate of alumina.

(*c*) Sulphate of copper.

(*d*) Potassium cyanide for the surface hardening of tools.

(*e*) Metal-polish (liquid).

(*f*) Grease, machine.

(*g*) Aluminium paint.

(7) Candle-power maintenance of various types of railway signal lamps with various grades of oil, for the Signal Engineers Committee of the Indian Railway Conference Association.

(8) Deterioration of rubber-insulated electric cables under storage conditions.

The work in connection with items 2, 7 and 8 is still in progress. That in connection with item 5 has been concluded and the results and report are under consideration.

65. *Testing of disinfectants.*—It has been decided by the Government of India that the Government Test House should undertake the chemical testing of disinfectants for use on board ships, and instructions have been drawn up in collaboration with the Indian Medical Department to regulate the drawing and sending of samples of such disinfectants for tests.

66. *Plant and apparatus.*—The following items of plant and apparatus were added during the year to the laboratories of the Government Test House :—

Physical Section.

1. One Stretching Test Machine, for testing rolling rubber rings for Automatic Vacuum Brake gear.

Cement Section.

1. An Adie's Cement Testing Machine, with accessories.
2. One Vicat Needle Apparatus, complete.
3. One Copper boiler, with tray and gas burner, for Le Chatelier test.
4. One Balance, Berenger's pattern.

Textile Section.

1. One Knowle's Yarn Balance, complete.
2. One Fadeometer, complete.
3. One Holophone Day-Light Standard, No. 10.

Electrical Section.

1. One Evershed and Vignoles "Megger" Insulation Tester (500 Volts), Range o-100 megohms.
2. One Weston Model 310 Portable Single Phase A. C. & D. C. Wattmeter, Range : normal current 1 and 2 amps, normal volts 75 and 150.
3. One Weston Model 155 Portable A. C. Ammeter, Range 0-1 and 0-2 amps.
4. One Weston Model 432 Junior Portable Single Phase A. C. and D. C. Wattmeter, Range: normal current 1 ampere, normal volts 150 and 300.
5. One Weston Model 45 Portable D. C. Voltmeter, Range : 0-3 and 0-15 volts.
6. One Weston Model 155 Portable A. C. Ammeter, Range : 0-1 and 0-2 amps.
7. One Weston Model 45 Portable D. C. Milliammeter, Range : 0-150 milliamps.
8. One Weston Model 370 A. C. & D. C. Ammeter, Range : 1 and 2 amps.
9. One Chemical Balance.

Chemical Section.

1. Two 30 c. c. Platinum Crucibles, with lids.
2. One Polariscope, Schimdt Haensch Lippick's model, with accessories.
3. One Gallenkamp Electric Drying Oven, with automatic adjustable control.
4. One spectrometer, with accessories.
5. One Paint Spraying Plant, complete with 220 Volts D. C. ¼ H. P. motor and compressor, spraying gun, and accessories.
6. One Assay Balance, Becker's, for charge up to 10 gund in each pan.
7. One I. P. T. setting-Point Apparatus, complete.
8. Apparatus for scratch test of cellulose lacquers and varnish.
9. Gas Analysis Apparatus, with absorption bulb.

Oil Sub-Section.

1. Apparatus for determining the penetration characteristics of greases.
2. A bank of 6 calibrated capillary tubes, with accessories, together with 3 spare capillary tubes, for sludge test apparatus.

The laboratories of the Test House are equipped with up-to-date scientific apparatus and testing appliances by means of which tests, analyses and investigations can be carried out for Government departments, State and Company Railways, Indian States and private parties. No charges are made for its services to non-commercial civil departments of the Central Government. The fees charged for work done for other authorities are given in the schedules mentioned in appendix I, paragraph 29. They can also be ascertained on application to the Superintendent, Government Test House, Alipore, Calcutta.

CHAPTER VII.

ENCOURAGEMENT OF INDIAN INDUSTRIES LOCAL PURCHASES AND OTHER ACTIVITIES OF THE DEPARTMENT.

67. *Registration of firms at Headquarters' office.*—The lists of approved contractors maintained by the Department had to be entirely recast during the year in accordance with the provisions of the revised Stores Purchase Rules which came into full force from the 1st January 1931.

The new rules do not prescribe the maintenance by the Indian Stores Department of the list, maintained under rule 3 (*b*) (*i*) of the old rules, of firms approved for the supply of imported stores used on important construction works let out on contracts.

The lists of firms registered for the supply of important plant and machinery and iron and steel work maintained under rules 3 (*c*) and 10 of the old rules and continued under rule 4 of the revised rules, and the departmental lists of firms registered for the supply of stores of various descriptions were expanded to include firms not represented in India which were not registered in the past, as the scope of operations of the Department was then limited to firms established or represented in the country. As a result of these changes, 1,185 foreign firms were included in the list under the former, and 28 under the latter category. Of those, 1,159 firms were, however, already on the books of the Department through their agents or representatives established in India, and the net addition of foreign firms to the list amounted to 54 names only.

In addition to these, 256 firms established in India were registered during the year, and 25 firms were removed from the list, six of which had ceased to exist and the others were unable to justify their retention as approved suppliers.

The table below indicates the total number of firms on the books of the Department at the close of the year, distributed amongst the various territories and classified according to the different descriptions of stores dealt with by them :—

Description of Stores.	Bengal.	Bombay Presidency.		Madras.	Punjab.	United Provinces.	Delhi.	Burma.	Bihar and Orissa.	Central Provinces.	Assam.	N.-W. F. P.	Other than British possessions in India.	Firms outside India.	Total.
		Bombay.	Karachi.												
Railway Materials	71	47	5	10	12	3	7	7	5	..	..	..	..	36	203
Hardware	92	72	18	21	31	33	17	13	4	..	..	..	8	3	312
Implements and Tools	57	43	10	15	16	4	12	11		..	..	..	3	3	176
Metals	86	58	15	15	22	10	15	15	5	1	..	..	3	..	245
Mechanical Equipment	180	142	22	36	32	16	24	32	4	..	1	..	8	989	1,486
Electrical Equipment	111	75	16	23	20	13	16	15	3	..	1	..	9	173	475
Oils	51	35	4	15	9	8	4	8	..	..	1	..	6	..	141
Paints	55	47	13	17	7	3	5	8	2	1	1	..	3	..	162
Chemical (excluding Medicines and Drugs)	45	25	9	7	7	5	6	8	..	..	..	..	3	3	118
Textiles—															
(*a*) Cotton Materials	83	73	3	8	32	28	13	8	..	2	..	..	9	2	261
(*b*) Woollen Materials	24	22	2	6	11	16	3	2	..	..	..	1	8	..	95
(*c*) Jute, flax and Hemp materials	57	24	4	2	17	7	2	5	1	1	..	..	..	1	121
(*d*) Silk Goods	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Leather Goods	22	8	2	3	6	15	4	3	..	..	..	..	..	..	63
Structural Engineering	47	15	6	7	5	4	3	8	2	1	..	..	..	..	98
Miscellaneous Stores	241	180	38	47	72	60	46	40	3	9	1	2	14	8	761
Medical, Surgical and Scientific stores and Equipment (excluding Medicines, Chemicals and Drugs).	18	5	..	4	7	1	..	1	..	..	..	..	..	4	40
Wireless Stores	2	2	..	..	..	..	..	1	..	..	..	..	..	10	15
Mathematical, Drawing and Surveying Instruments and equipment.	11	9	..	1	1	..	1	1	..	..	..	..	..	1	25
Total ..	1,253	882	167	237	307	227	178	186	31	15	5	3	74	1,233	4,798
Deduct.—Overlapping figures for firms registered for more than one item.	752	498	55	136	131	55	79	107	23	..	2	..	2	20	1,885
Firms removed on abolition of List I maintained under Rule 3 (*b*) (1) of the Old Stores Rules.	56	40	40	19	17	40	12	14	1	2	..	..	2	..	243
Total ..	808	538	95	155	148	95	91	121	24	2	2	..	29	20	2,128
Nett total ..	445	344	72	82	159	132	87	65	7	13	3	3	45	1,213	2,670

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68. *Registration of firms at local purchase circles.*—In addition to the numbers mentioned in paragraph 66, fiftyfour firms were added to the local lists of approved suppliers maintained by the provincial organisations of the Department. Of these, 35 are located at Calcutta, 8 at Bombay, 10 at Karachi and one at Madras.

69. *Advice to manufacturers and encouragement to Indian industries.*—Efforts were continued during the year to assist manufactures in India in improving the quality of their products, by means of technical advice and suggestions in the course of purchase, inspection and testing of materials, and every endeavour was made to substitute articles of Indian manufacture for those imported from abroad. A few noticeable instances are given in the following paragraphs.

70. *The Textile industry.*—There has been a marked increase during the year in the number of mills spinning finer counts of yarn and weaving finer qualities of cloth and it will be possible in future to obtain fine long cloth, muslin, etc., from local manfacturers instead of importing the same from abroad. A leading firm of textile manufacturers in Bombay have evolved a new type of bleached absorbent gauze for surgical and medical purposes to take the place of gauze which was previously imported.

The following textile manufactures received special attention during the year :—

Jean khaki for bandoliers.—The question of preparing a suitable specification for khaki jean for making up into bandoliers was taken up in the year 1923, at the instance of the Army authorities. At the time, khaki jean to an existing Army specification was supplied by two firms only, one in Bombay and the other in Cawnpore. The former firm supplied jean which satisfied the specification, but when made up into bandoliers the finished articles failed to pass the prescribed tests. The material supplied by the latter firm did not satisfy the Specification but the finished bandoliers satisfactorily stood the tests. From a close scrutiny of the existing specification, it was discovered that it did not contain all the particulars necessary to show manufacturers the precise class and nature of the material required. A draft specification embodying all the essential particulars was prepared and submitted to the Army Department and has since been accepted by them, with a few minor alterations. No difficulty is now anticipated in the manufacture in India of a material suitable in all respects for making the article required and it will no longer be necessary to restrict the orders to one or two firms who held a monopoly for the supply in the past.

Cloth for the manufacture of haversacks.—The cloth for the manufacture of haversacks for the Army has in the past been obtained through the Director General, India Store Department, London. A sample of cotton canvas, khaki, received from a mill in India was forwarded to the Inspector of Clothing Stores, Shahjahanpur. The quality, when water-proofed, has been reported on as suitable for the purpose by the Army Inspectorate and the Director of Contracts has been asked to place his future demands with the Department for purchase in India.

Drill, cotton, bleached.—At the suggestion of the Department, the Royal Indian Marine authorities have agreed to substitute bleached drill of local manufacture for American pepperil drill.

71. *The Engineering industry.*—There has been a marked improvement, since the constitution of the Department in the capacity and equipment of firms engaged in the manufacture of wagons, bridges and steel structures. Although ten years ago there were firms building wagons and fabricating steel bridges, work of the magnitude and quality now common could not have been undertaken at that time and many components were obtained in the finished state from abroad. The continual pressure of the Inspectorates for a higher standard of worksmanship has necessitated improvement in method and the use of additional plant, and these in turn have resulted in an increased capacity for dealing with difficult or more complicated types of work. Every possible encouragement has been given to these industries by the Department by entrusting to local firms its own demands for important bridges and structural work not undertaken by them before, *e.g.*, suspension bridges, aeroplane hangars, steam launches, etc., and by inducing other purchasing organisations to divert such orders to manufacturers in India.

The Bally Bridge for the Calcutta Chord Railway, an illustration of which appears as frontispiece, is a striking example of the magnitude of steel bridge work which can now be undertaken successfully in India. The bridge, which consists of seven spans (excluding the approach spans) of 350 ft. each, aggregating 17,000 tons in weight, including heavy cast steel bearings, has been entirely fabricated in India under the supervision of the Calcutta Inspection Circle of the Department.

Couplers, electric.—A fairly large contract for Kent type electric couplers was placed in India by a Railway Administration with a local firm in Bombay. As the patent had run its course, the firm undertook manufacture of the article on a production basis. Every assistance was given to the firm by the local Inspectorate, especially with regard to improvement in the finished aluminium castings and the method of assembling the copper contacts to obtain high efficiency. A high class coupler was produced which satisfactorily withstood severe overload tests. The results obtained are most encouraging, as this is the first time a firm in India has attempted to manufacture this type of coupler.

Bodies for M. T. Vehicles.—The Army authorities in India were asked to consider the possibilities of manufacture in the country of bodies for M. T. vehicles and it was suggested that, if detailed drawings were available and firms in India were given an opportunity to quote, all requirements could probably be met in India without sacrificing economy or quality. The indenting department agreed to order thirtysix bodies from a manufacturer in India as an experimental measure.

Other miscellaneous articles.—Special interest was also taken during the year in the manufacture or substitution for imported materials of several other articles, among which may be mentioned pugrees, cooking ranges, rosin, glassware and enamelware, plywood boards, bituminous solution, metal polish and soap.

72. *Important purchases of articles of Indian manufacture.*—The following is a list of the more important contracts placed during the year for products which were wholly or partially manufactured in India.

	Amount. Rs.
TEXTILE MATERIALS.	
1. Waste, cotton, white and coloured	17,33,000
2. Drill, khaki, white, coloured and grey	11,80,000
3. Greatcoat cloth, serges and broad cloth	10,56,000
4. Yarn, cotton and woollen	4,42,500
5. Socks and stockings	3,31,000
6. Tents and tent components	2,79,000
7. Pugree cloth, muslin, nainsook, calico, etc. ..	2,50,000
8. Jackets, cardigan and jerseys	2,06,000
9. Bags, postal, dosuti, flax and jute	2,02,000
10. Twine, jute and hemp	1,68,000
11. Blankets, woollen and Kamblies	1,58,000
12. Blanketting cloth	1,57,000
13. Sheets, hospital, barrack	1,47,000
14. Jhools and rugs	1,38,000
15. Wool, cotton, absorbent, surgical	1,31,000
16. Durries, cotton and woollen	1,10,000
17. Garments, uniform	1,04,500
18. Putties, woollen	1,00,000
19. Gauze, absorbent, surgical	96,000
20. Paulins, flax, jute, canvas	92,000
21. Hessians and gunnies	85,000
22. Overcoats of blanketting cloth, greatcoats and drawers	80,000
23. Dosuti	72,000
24. Dhotie cloth and sheeting	64,000
25. Flannelette—mark III	58,000
26. Canvas, jute, flax, etc.	55,000
27. Covers, waterproof	53,000
28. Tapes and webbings	52,000
29. Twill, cotton khaki	51,000
30. Long cloth, garah cloth	46,000
31. Rope, manilla, hemp and coir	44,000
32. Kulahs	39,000
33. Bags, postal, leather, and leather articles ..	33,000
34. Bandage cloth	29,000
35. Bunting	25,000
36. Gloves, worsted, mitten	25,000
37. Comforters, caps comforters and caps balaclava ..	23,000
38. Bags, ration, nose, and haversack	20,000
39. Foots and chaplis	17,000
40. Ground sheets	16,000
41. Flannel	15,000
42. Banians, cotton	14,000

	Amount.
	Rs.
TEXTILE MATERIALS—*contd.*	
43. Thread, sewing, cotton	13,000
44. Cloths, tea, tray, table, etc.	13,000
45. Dusters	12,000
46. Cases, mattresses, pillows, etc.	12,000
47. Carpets, pile, woollen	10,000
48. Lungis	10,000
ENGINEERING AND ALLIED STORES.	
49. Cement	14,66,500
50. Oil, axle, all weather	7,75,500
51. Road tar and other road dressing material	6,80,000
52. Steel sections and steel sheets	6,76,000
53. Oil, caster	5,12,000
54. Wire, copper, bare	4,46,000
55. Oil, linseed, raw and double boiled	4,04,500
56. Pipes and specials, C. I.	4,00,000
57. Steel structures	3,90,000
58. Oil, kerosene	3,61,000
59. Paints and dry pigments	3,41,500
60. Petrol	2,80,000
61. Tanks, pressed steel	2,63,500
62. Oil, gas making	2,58,000
63. Cables, and conductors, electric	2,19,000
64. Pig iron	1,94,500
65. Insulators, porcelain	1,06,000
66. Turpentine—genuine and substitute	1,02,000
67. Enamels and varnishes	85,500
68. Creosote	82,000
69. Steelwork for aeroplane hangars	82,000
70. Acids	67,500
71. Timber in squares	64,000
72. Steel shelving racks, almirahs and iron safes ..	55,000
73. Soap, soft and hard	48,500
74. Points rodding, for railways	39,500
75. Pipes and specials, earthenware	31,000
76. Fans, electric	27,000
77. Sleepers, timber, sal and deodar	25,500
78. Oil, cleaning	25,000
79. Locks	24,000
80. Oxygen gas	22,000
81. Timber	21,000
82. Target apparatus	14,500
83. Coal tar for painting purposes	12,000
84. Graphite	12,000
85. Fittings, water, miscellaneous	11,000
86. Grease	10,500

73. *Exhibition of Indian manufactures.*—In paragraph 60 of the Report for the year 1929-30 mention was made of the arrangements made in the Imperial Secretariat Building, New Delhi, of exhibiting articles of indigenous manufacture with the object of bringing the variety of manufactures and standard of quality attained to the notice of Government departments and the public. The important exhibits received during the year were :—

Pumps, Railway materials, paints, varnishes, acids, disinfectants, surgical dressings, soaps, enamelware, glassware, door and window fittings, floor tiles and ropes.

74. *Certification of material for refund of customs duty.*—The Metallurgical Inspector, Tatanagar, has been entrusted with the duty of issuing certificates in connection with the importation, free of duty, of certain items of raw material, *viz.*, electrolytic copper rods, copper weld rods, rough rolled aluminium rods, hot rolled aluminium rods, and steel wire rods for the manufacture of cables by the Indian Cable Company and the Aluminium Manufacturing Company. One thousand eightyeight tons of electrolytic copper rods, ten tons of copper weld rods, thirty tons of aluminium rods and one thousand seven hundred and fifty tons of steel wire rods were certified under this arrangement during the year. No charges are made by the Department for this service.

75. *Scrutiny of indents on the India Store Department, London.*—As a result of the introduction of the Revised Stores Rules, there was a further reduction during the year in the number and value of indents on the India Store Department, London, received for scrutiny and increase in the percentage of items challenged in those indents. One thousand one hundred and sixtyfive indents of the estimated value of Rs. 2,83,80,217 were examined during the year as against 1,414 indents of the aggregate value of Rs. 3,16,06,941 during the year 1929-30. Items aggregating Rs. 14,82,188 or 5·2 per cent. of the total value of the indents examined (as against 5·7 per cent. during the preceding year) were challenged and the results communicated to the indenting authorities.

Financial Statement of the Working of the Indian Stores Department for the years 1927-28, 1928-29, 1929-30 and 1930-31.

Particulars.	Amount.			
	1927-28.	1928-29.	1929-30.	1930-31.
	Rs.	Rs.	Rs.	Rs.
1. Pay of Officers ..	6,55,336	7,26,025	7,01,283	7,56,443
2. Pay of Establishment	5,97,467	6,63,837	7,01,131	7,22,573
3. Allowances	1,77,028	1,97,378	2,04,216	2,29,449
4. Grants-in-aid ..	600	600	600	181
5. Supplies and Services—				
(*a*) Expenditure in India	87,994	1,35,971	1,93,299	1,54,534
Deduct—amount treated as Capital Expenditure ..	10,968	8,663	18,342	9,968
Total ..	77,026	1,27,308	7,74,957	1,44,566
(*b*) Expenditure in England ..	..	..	..	604
Total Supplies and Services (excluding amount treated as Capital Expenditure)	77,026	1,27,308	1,74,957	1,45,170
6. Contingencies ..	1,19,002	1,14,171	1,10,311	1,16,190
Deduct amount treated as Capital Expenditure	517	..	..	..
	1,18,485	1,14,171	1,10,311	1,16,190
7. Works (including Petty Construction and Repairs) ..	9,558	36,097	78,807	17,772
Deduct—amount treated as Capital Expenditure	978	20,831	68,256	7,479
	8,580	15,266	10,551	10,293
8. Loss or gain by exchange (included with the cost of stores in the Profit and Loss Account)	86	89	48	48
9. Total direct Expenditure charged to Indian grant, (excluding expenditure in England)	16,47,071	18,74,168	19,89,695	19,97,190
Deduct—amount treated as Capital Expenditure and loss or gain by Exchange	12,549	29,583	86,646	17,495
10. Net direct expenditure	16,34,522	18,44,585	19,03,049	19,79,695
11. Expenditure on Stores in England, not treated as Capital Expenditure [item 5 (*b*)]	..	..	..	604
12. Leave salary and Overseas pay paid in England	47,614	31,072	47,358	84,363
13. Pensionary Charges ..	1,02,840	1,15,959	1,21,163	87,259
14. Government contribution to Provident Fund	38,540	41,957	42,766	49,984
15. Interest on Capital outlay	62,660	53,356	60,029	65,914
16. Depreciation charges	23,833	22,444	21,998	28,529
17. Stationery and Printing	45,867	40,589	38,436	38,004
18. Cost of Audit and Accounts	1,94,981	2,30,683	2,22,875	2,48,587
Total ..	21,50,757	23,85,625	24,57,674	25,82,939

Particulars.	Amount.			
	1927-28.	1928-29.	1929-30.	1930-31.
	Rs.	Rs.	Rs.	Rs.
1. By 1% purchase charge	3,48,884	3,39,403	4,17,143	4,52,794
2. By 1% inspection charge	2,43,080	2,39,323	3,35,024	3,71,037
3. By recoveries on account of fees for tests, inspections, etc., made from Government Departments, Railways, private firms and individuals ..	9,37,357	7,11,977	9,64,185	8,02,144
4. By miscellaneous receipts	44,572	33,140	55,880	32,205
Total Receipts ..	15,73,893	13,23,843	17,72,232	16,58,180
5. By net loss for the year	5,76,864	10,61,782	6,85,442	9,24,759
Total ..	21,50,757	23,85,625	24,57,674	25,82,939

CHAPTER VIII.

FINANCE.

76. *Statistics of revenue and expenditure.*—The statement facing this page exhibits the earnings and expenditure of the Department during each of the four years ending with the year 1930-31, the figures for the year under review being subject to further adjustments through supplementary accounts.

It was explained in paragraph 64 of the last report that the Government of India had decided to discontinue the levy of departmental charges for work done by the Indian Stores Department on behalf of the non-commercial civil departments of the Central Government, with effect from the 1st April 1930. No recoveries were accordingly made from such departments during the year under review. The Government of India also simultaneously decided that recoveries from Government departments which were hitherto credited in the general accounts as Revenue should in future be adjusted in reduction of expenditure of the Department. The figures shown on the credit side of the financial statement include the recoveries from non-Government departments which are adjusted as Revenue, as well as those from Government departments, treated as Reduction of Expenditure, also a *pro-forma* credit, calculated at schedule rates, for work done on behalf of the non-commercial civil departments of the Central Government against which no actual charges are made. The figures on the debit side include the gross direct expenditure chargeable to Revenue account as well as indirect charges, usually incorporated in the Profit and Loss accounts of commercial undertakings.

77. *Financial position.*—The preliminary account for the year 1929-30, as presented in paragraph 62 of the report for that year, showed that the revenue of the Department amounted to Rs. 17,78,049 and the total direct and indirect expenditure amounted to Rs. 24,56,145 showing a net deficit of Rs. 6,78,096. The final accounts, which were subsequently compiled and have been incorporated in the statement opposite, closed with a total expenditure of Rs. 24,57,674 and revenue of Rs. 17,72,232, showing a net deficit of Rs. 6,85,442. These figures indicate a marked improvement over the record of the preceding years but it must be remembered that the year 1929-30 followed an year of acute industrial unrest and the realisations of that year, which exceeded those of the preceding year by Rs. 4,48,389 and the highest previous record (obtained in the year 1927-28) by Rs. 1,98,339, included a substantial carry over from the year 1928-29. Though, for these reasons, the revenue earned during the year 1930-31, which amounted to Rs. 16,58,180, fell short of the realisations of the year 1929-30 by Rs. 1,14,052, it exceeded the previous highest record by Rs. 84,287. The expenditure of the year, which amounted to Rs. 25,82,939, exceeded the corresponding figure of the preceding year by Rs. 1,25,265. As explained in Chapter II, only a few additions were made to the staff during the year and the increase was mainly due to normal growth of expenditure on salaries, filling of vacant appointments and payment of certain arrears relating to previous years.

In spite of these facts, the ratio of expenditure to earnings was maintained at the average of the three preceding years and exceeded that of the year 1929-30 by ·1 only, having amounted to 1·5 per rupee earned as against 1·4 during the year 1929-30.

It will be observed from the financial statement that the fall in the earnings of the Department is almost entirely due to a decline in the amount of fees realised for the inspection of stores which are not purchased by the Indian Stores Department, the recoveries for the purchase and inspection of orders placed by the Department itself having exceeded the previous year's record by Rs. 35,651 and 36,013 respectively.

SIMLA; J. S. PITKEATHLY,

Dated the 24th June 1931. *Chief Controller of Stores,*
Indian Stores Department.

APPENDIX I.

(*Vide* paragraph 9.)

HINTS FOR THE GUIDANCE OF AUTHORITIES IN INDIA DESIROUS OF UTILISING THE SERVICES OF THE INDIAN STORES DEPARTMENT.

1. *Authorities for which the Indian Stores Department is permitted to act.*—The Indian Stores Department is authorised to arrange for the purchase and inspection of stores on behalf of all Government Departments, Central as well as Provincial, State and Company Railways, Indian States and *quasi*-public bodies in India. It must be understood, however, that the department acts merely as an agent in this connection and is not in any way responsible as principal either to the seller or to the buyer.

2. The services of the Department can be utilised for the inspection of stores, orders for which are placed by the consuming authorities direct, and for the testing and analyses, of materials at the Government Test House and the Metallurgical Inspectorate, by Government departments, Company Railways, *quasi*-public bodies and Indian States, as well as by private parties.

3. *Classes of stores which can be purchased through the Indian Stores Department.*—The Indian Stores Department undertakes to arrange for the supply of all classes of stores except :—

(1) Foodstuffs and forage.

(2) Lethal stores.

(3) Stationery stores, printing stores and office machinery and appliances as detailed in the appendix to the Rules for the supply of Printing and Stationery Stores for the Public service.

(4) Medical stores.

(5) Mathematical instruments, which under standing orders are to be obtained from the Mathematical Instrument Office.

(6) Scientific instruments and accessories of a special character which involve a departure from standard.

(7) Coal and coke in cases in which the total annual requirement is less than 150 tons in respect of each commodity, and firewood and charcoal.

(8) Straw.

(9) Road metal, bricks, stone, marble and similar building materials, lime, sand and chalk.

(10) Country made wooden furniture.

(11) Other classes of stores of a value not exceeding Rs. 100 in each case, except stores for which running and rate contracts have been arranged.

The department is also prepared to make purchases of articles costing less than Rs. 100 in value in special cases in which indenting officers find it difficult or inconvenient to make purchases direct.

4. *Organisation of the Purchase Branch.*—Besides a purchase branch in the Headquarters Office, divided into a number of sections dealing with different classes of stores, which is located at Simla from the middle of April to the middle of October and at the Imperial Secretariat Building, New Delhi, during the rest of the year, Provincial Purchase Circles are located at Calcutta, Bombay and Karachi. The Postal and Telegraphic addresses of these Circles and their scope of operations are given below :—

Postal Address.	Telegraphic Address.	Territory within which allowed to operate (*a*).
Controller of Purchase, Calcutta Circle, Indian Stores Department, 6, Esplanade East, Calcutta.	Storchase, Calcutta	Bengal, United Provinces, Assam, Bihar and Orissa, Madras Presidency (Northern part) and Burma.
Controller of Purchase, Bombay Circle, Indian Stores Department, Hararwalla Building, Wittet Road, Ballard Estate, Bombay.	Storchase, Bombay	Bombay Presidency (except Sind), the Central Provinces, the Madras Presidency (southern parts) and Cawnpore (for textiles only).
Controller of Purchase, Karachi Agency, Indian Stores Department, Artillery Maidan, Karachi.	Storchase, Karachi	Sind, Baluchistan, the Punjab and Cawnpore (for textiles only).

(*a*) This has reference to the market in which the order is placed and not to the headquarters of the indenting officer.

5. Provincial purchasing officers are authorised to receive direct indents for any item (or inter-connected items) of which the estimated cost does not exceed Rs. 2,500 and indents for a number of items the estimated total cost of which does not exceed Rs. 10,000. The Controller of Purchase, Calcutta Circle, is authorised, as a special case, to deal direct with indents for the purchase of jute goods up to Rs. 50,000 and for requirements of the Telegraph Department up to Rs. 15,000; the Controller of Purchase, Bombay Circle, for cotton yarn for the Jail Department, Bombay Presidency, up to Rs. 25,000 and for stores for the Royal Indian Marine up to Rs. 15,000 ; and the Controller of Purchase, Karachi Circle, for mild steel sections, for which orders have to be placed elsewhere than at Calcutta or Bombay, up to Rs. 15,000. Indents for stores the estimated cost of which is within these limits should be addressed direct to the appropriate provincial purchasing officer and those exceeding these limits should be forwarded to the Headquarters Office.

6. *Instructions for the preparation of indents.*—Indents should be submitted in duplicate on the standard Indian Stores Department indent form, supplies of which can be obtained on application from the office of the Chief Controller of Stores or from any of the Purchase Circles at Calcutta, Bombay and Karachi. The items indented for should be described in sufficient detail and any additional information should be given which will assist in the disposal of the indent, *e g.*, references to catalogues or to previous supplies. The purpose for which stores are required should always be stated and reference to previous supply should be made when duplicates are required.

7. As different classes of stores are dealt with in different sections of the Purchase Branch of the Indian Stores Department, separate indents should, as far as practicable, be prepared for stores falling under various classes, namely :—

(1) Power plant and spares, wireless stores, equipment for lighthouses, sewage plant.

(2) Pumping plant, boring plant, steam, gas and oil engines, motors ice plant and refrigerators, punkha motor sets, excavators, oxy-acetylene plant, condensing and distilling plant.

(3) Engineering plant and machinery, motor vehicles, road rollers, tractors, and workshop equipment including spares.

(4) Electrical stores (including cables and bare copper conductors of all descriptions).

(5) Structural steel work of all kinds, wire ropes, railway materials, fire extinguishers, target apparatus.

(6) Water supply stores (including hose pipes), refuse, nightsoil, and sanitary carts, metals rustless brass, wire gauge, ball and roller bearings, and wires of all kinds other than electrical.

(7) Steel sections, steel sheet piling, metal sheets of all kinds, steel window frames, doors and fittings, asbestos cement sheets, bearing metals, hair and leather belting.

(8) Miscellaneous engineering and hardware stores (including rubber goods, except vacuum brake fittings), glassware, enamelware, oil lamps and lampware, crockery, cutlery, locks, safes, chests, cooking ranges, buttons, badges, explosives, tools, clocks, watches, buckets, photographic materials, bicycles, steel furniture, fire bricks, saw blades, etc.).

(9) Lubricating oils and greases.

(10) Paints and painters' materials (including linseed oils, turpentine and methylated spirits).

(11) Chemicals, soaps and road dressing materials.

(12) Vacuum brake fittings.

(13) Cement, timber, coal and coke.

(14) Textile, leather and allied stores.

Each separate indent should show items of a like description grouped together.

8. Indents for the purchase of plant and machinery should provide the fullest information possible and particular care should be taken to see that all peculiar local or special conditions, which might involve departures from normal standards, are mentioned.

9. Indents for spare parts should be compiled from makers' spare parts catalogues, where available, and care should be taken to quote the correct symbol, number and nomenclature or code word applicable to the particular

type of plant. The makers' number of the machine should also be stated. Failing this, the date and source of original supply should be given. In dealing with demands of this kind drawings are frequently essential.

10. Sufficient time should be allowed to the department for arranging the purchase of stores. Additional expenditure is frequently involved in arranging purchases at short notice.

A specific date should be stated in the indents by which the stores are required, and expressions such as " immediately ", " as early as possible ", or " urgent " should be avoided. These expressions are constantly used, but they defeat their own object by making it impossible for the Indian Stores Department to differentiate between the degree of urgency of the various indents.

Indenting officers are also requested to spread the demands made on the Indian Stores Department evenly over the whole year as far as possible. The concentration of a large number of orders towards the close of the year not only tends to entail extra expenditure and inconvenience but makes for difficulties in the efficient disposal of the business connected with the purchase and inspection of stores.

11. Indentors should clearly state whether the goods are to be booked by goods or passenger train, whether at " Owner's " or at " Railway " Risk and whether they are to be insured on rail.

12. It is desirable that wherever possible the Stores Department should be made aware of the approximate amount which the indentor expects to pay for the stores indented for. To this end against each item the last price paid should be entered in the " estimated cost " column in the indent form. The estimated cost of freight and the Indian Stores Department charges should be added to the total. If information as to the latest price paid is not available, a rough estimate should be given.

13. In the case of authorities with whom adjustments are made through the Exchange account the appropriate certificate of availability of funds on page 4 of the indent form should be completed on all indents, and in the case of others the treasury receipt or bank deposit Receipt must accompany or follow the indents, *vide* paragraph 18.

14. *Disposal of indents.*—The Indian Stores Department holds no stocks of stores of any kind. On receipt of an indent supply is arranged, either by placing a separate order for the stores demanded or by combining the demand with others for compliance under a general contract, or, where convenient, under a " running " or " rate " contract. Copies of all orders are endorsed to indenting officers and consignees (if other than indenting officers).

15. In the event of the quotation which it is proposed to accept being considerably higher than the amount estimated by the indentor, a reference

is made to him before the order is actually placed. In the absence of any special instructions on this point, the practice is to refer to the indentor if his estimate of the total cost of the stores demanded in any one indent is likely to be exceeded by 10 per cent. or Rs. 10,000, excepting when the total cost is not more than Rs. 1,000, in which case no reference to the indentor is made.

16. A list of the Rate and Running contracts entered into during the year 1930-31 is given in Appendix VIII. A list of the contracts in force, or copies of those in which an intending indentor may be interested, will be furnished on application. Arrangements can be made to enable Government officers, intending to avail themselves of the facilities, to requisition against such contracts direct from firms.

17. *Adjustment of accounts.*—Debits for the cost of stores purchased through the Indian Stores Department by Government officers and for the departmental charges for purchase (and inspection) levied by the Indian Stores Department are raised by the Audit Officer, Indian Stores Department, against the accounts officer of the consignee in the account of the month in which the suppliers' bills are paid, and exchange accounts showing all such transactions are sent by the Audit Officer, Indian Stores Department, to the accounts officer concerned, in the beginning of the second month after that to which the transactions pertain. Advance intimations of payments are sent to the consignees by the Audit Officer, Indian Stores Department, after a week of the date of payment, to keep the former informed of their liabilities and expenditure in respect of bills paid direct on certification by Inspectorates or in cases in which amounts passed by consignees are altered in audit.

18. In the case of authorities against whom book debits cannot be raised, *e.g.*, *quasi*-public bodies and Indian States, the indenting officers have the option either—

(*a*) of placing a sum equivalent to the estimated cost of the stores, *plus* the departmental charges payable for the services of the Indian Stores Department, to the credit of the Audit Officer, Indian Stores Department, in a Government treasury, forwarding the treasury receipt with the indent ; or

(*b*) of depositing in a branch of the Imperial Bank of India in the name of the Audit Officer, Indian Stores Department, a sum of money sufficient to cover the estimated cost of the stores, *plus* departmental charges, with instructions to the bank that the sum should be strictly reserved for the purpose of meeting demands from the Audit Officer, Indian Stores Department, which should be complied with by the transfer of the amount to the Government account. The deposit receipt granted by the bank should be forwarded with the indent.

The latter alternative has been introduced to avoid large sums of money being locked up without interest.

19. *Inspection, Tests and Chemical Analyses.*—The inspection and testing staff of the Indian Stores Department is located at places noted below. The principal items of work dealt with in each organisation are also indicated :—

Postal address.	Telegraphic address.	Class of inspection work undertaken.
The Controller of Inspection, Calcutta Circle, Indian Stores Department, 6, Esplanade East, Calcutta.	Storspect, Calcutta	Structural railway and general engineering stores, wagons, underframes, castings and textile stores. Inspectors are stationed at Jamshedpur, Asansol and Kulti to facilitate the inspection of wagons, castings, etc., manufactured at those places.
The Controller of Inspection, Bombay Circle, Indian Stores Department, Hararwalla Building, Wittet Road, Ballard Estate, Bombay.	Storspect, Bombay	Steel work such as bridges and roof trusses, railway and general engineering and textile stores.
The Assistant Controller of Inspection, Karachi Agency, Indian Stores Department, Artillery Maidan, Karachi.	Storspect, Karachi	Structural and general engineering stores.
The Assistant Controller of Inspection, Upper India Circle, Indian Stores Department, Attar Singh Building, The Mall, Lahore.	Storspect, Lahore ..	Plant and machinery, structural railway, general engineering and textile stores.
The Inspector-in-Charge, Cawnpore Inspection Branch, Indian Stores Department, 254, Nawabganj, Cawnpore.	Storspect, Cawnpore	Textile and general engineering stores.
The Inspector-in-charge, Madras Branch, Indian Stores Department, Old High Court Buildings, Madras.	Storspect, Madras ..	All kinds of textile stores.
The Metallurgical Inspectorate, Indian Stores Department, Burma Mines, Tatanagar.	Storspect, Tatanagar	Rails and all kinds of material manufactured by the Tata Iron and Steel Co., and allied companies, structural and general engineering stores, and the testing of metals.
The Superintendent, Government Test House, 30 Judge's Court Road, Alipore, Calcutta.	Slim, Calcutta ..	Chemical, physical, mechancical and electrical testing and analyses of materials of all kinds.

20. These organisations undertake the analyses, tests and investigations of chemicals and other stores, and inspection of material purchased by the Indian Stores Department, or by any other purchasing authorities. Where necessary, inspection in the country of origin is also arranged through the Director General, Indian Store Department, London. No additional charges are levied by the Department for the cost of such inspection.

21 Requests for inspection of purchases not made through the Indian Stores Department should be addressed to the nearest Inspectorate, or to the Chief Controller of Stores, Inspection Branch, Indian Stores Department, on form I. S. D.-40, copies of which can be obtained from him or any Inspectorate free of charge. Requests for tests or analyses should be addressed to the Superintendent, Government Test House, Alipore, Calcutta, or the Metallurgical Inspector, Tatanagar, as the case may be.

22. *Complaints.*—In the event of serious complaints in regard to quality or price of stores, or delay in supply or delay in raising debits, full details should be furnished to the Chief Controller of Stores, Indian Stores Department, when they will be carefully investigated. Minor complaints should, however, be referred to the supplying firm direct, and, if necessary, a copy of the complaint endorsed to the inspecting officer concerned in cases where the stores have been inspected by the Indian Stores Department. If the matter is not satisfactorily settled, it should be referred to the Chief Controller of Stores.

23. All complaints should be made as promptly as possible, as delay may prejudice the chances of obtaining redress, particularly if arbitration or legal proceedings are involved.

24. *Rejections and disposal of rejected stores.*—In the case of orders placed by the Indian Stores Department, this Department is the contracting party, and the final rejection of stores lies within its competence alone. Therefore, it is not permissible for an indenting officer or consignee to reject stores which have been accepted by the Department. In cases in which an indenting officer considers that grounds for the rejection of such stores exist, a full report should be forwarded immediately to the Indian Stores Department Inspectorate concerned, and the goods complained of should be carefully stored to avoid loss or deterioration, pending investigation by the Department and the issue of final instructions as to their disposal. Should it be decided that the stores should be rejected, intimation to this effect will be furnished immediately to the contractor by the Indian Stores Department, and he will be informed that the stores lie at his risk from the date of such rejection, and that if not removed within a fortnight of rejection the purchaser will have the right to dispose of the stores as he thinks fit at the contractor's risk and on his account.

25. Cases occasionally occur in which stores are despatched to their destination after merely visual examination at the contractor's premises, works or godowns on the understanding that their final acceptance or rejection shall depend on the results of the tests carried out at the Government Test House. In such cases if the stores are rejected, the contractor will be informed at once, and the stores will lie at the consignee's depot at the contractor's risk from the date of such rejection, and if not removed within a fortnight of rejection, the consignee will have the right to dispose of them as he thinks fit at the contractor's risk and on his account.

26. Similarly, stores, which are rejected by the inspecting officer appointed by the Indian Stores Department, after delivery, under the terms of the contract for inspection at the consignee's depot, will lie at the consignee's depot at the contractor's risk from the date of such rejection, and if not removed within a fortnight of rejection, the consignee will have the right to dispose of them as he thinks fit at the contractor's risk and on his account.

27. Stores rejected in the circumstances indicated above and not removed by the contractor within the period allowed for such removal should be disposed of by the consignee, either by return to the contractor or in such other manner as he considers most suited to the circumstances in each case, with the least possible delay.

28. *Departmental charges.*—Under the orders of the Government of India the Indian Stores Department levies a charge of 1 per cent. for purchase and 1 per cent. for inspection of the total cost of orders placed through its agency, on behalf of authorities in India, except in the case of orders placed on behalf of non-commercial Civil Departments of the Central Government.

The charge of 1 per cent. for inspection includes all sampling and testing before the contract is concluded, and also, where necessary, sampling and testing during the currency of the contract. These charges are adjusted by the Audit Officer, Indian Stores Department, with the cost of stores.

29. The charges for analyses and tests of chemicals and other stores, and for inspection of purchases made by other purchasing authorities, carried out at the Government Test Houses, the Metallurgical Inspectorate or any other organisation under the Inspection branch of the Department are given in detail in the schedules prescribed by the Government of India, Department of Industries and Labour, copies of which can be obtained from the Manager, Government of India Central Publication Branch, 3 Government Place, West, Calcutta. Bills for these charges are prepared by the heads of inspection or testing organisations and forwarded to the parties concerned for acceptance and adjustment through exchange account in the case of Government departments (including State and Company Railways) and payment in cash, either direct or into the nearest Government treasury, in the case of other authorities and private concerns.

30. No charge is made for services rendered by any branch of the Department (including the Government Test Houses and the Metallurgical Inspectorate) to non-commercial Civil departments of the Central Government.

GANIZATI(

LEAVE RESERVE
(Technical).

2 Assistant Controllers of Purchase.
4 Assistant Engineers (Inspection) and Inspectors of Stores.
3 Examiners of Stores.
2 Chemical Assistants.
Physical Assistant.

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Chemical Assistant.

Clerk.
grapher.
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Laboratory
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Peons.
Peon.
wkidar.
Mali.

CAWNPORE BRANCH.

Inspector-in-Charge.

Examiner.
5 Clerks.
2 Clerks.
Duftry.
4 Peons.
Chowkidar.

UPPER INDIA CIRCLE.

Assistant Controller of Inspection.
2 Assistant Engineers (Inspection).
Examiner.
Head Clerk.
Stenographer.
4 Clerks.
Clerk.
Duftry.
4 Peons.
Farash.

KARACHI AGENCY.

Assistant Controller of Inspection.
2 Assistant Engineers (Inspection).
4 Examiners.
Head Clerk.
Stenographer.
15 Clerks.
4 Clerks.
Duftry.
7 Peons.
Chowkidar.

APPENDIX II.

ORGANIZATION OF THE INDIAN STORES DEPARTMENT AS IT STOOD ON THE 31ST MARCH 1931.

(*Vide* paragraph 11 of the Report.)

NOTE.—The appointments added during the year are shewn in *italics*.

CHIEF CONTROLLER OF STORES.

PURCHASE.

DIRECTOR OF PURCHASE.

- LEATHER.
  - Purchase.
  - Purchase.
- ENGINEERING.
  - Deputy Director of Purchase.
  - Assistant Director of Purchase.
- HARDWARE & MISCELLANEOUS.
  - Deputy Director of Purchase.
  - Assistant Director of Purchase.

PROVINCIAL.

- CALCUTTA.
  - Controller of Purchase.
  - Assistant Controller of Purchase.
  - Head Clerk.
  - Stenographer.
  - 28 Clerks.
  - 2 Duftries.
  - 11 Peons.
  - Chowkidar.
- BOMBAY.
  - Controller of Purchase.
  - Assistant Controller of Purchase.
  - Head Clerk.
  - Stenographer.
  - 16 Clerks.
  - *Clerk.*
  - Duftry.
  - 8 Peons.
- KARACHI.
  - Controller of Purchase.
  - Assistant Controller of Purchase.
  - Head Clerk.
  - Stenographer.
  - 19 Clerks.
  - *2 Clerks.*
  - Duftry.
  - 8 Peons.
  - Chowkidar.

ADMINISTRATION AND INTELLIGENCE.

- *Deputy Director of Administration and Intelligence.*
- *Assistant Director of Administration and Intelligence.*
- 6 Superintendents.
- Examiner of Stores.
- 46 Assistants.
- 110 Clerks.
- 6 Stenographers.
- 15 Duftries.
- Jemadar.
- 43 Peons.
- 3 Farashes.

INSPECTION.

- Director of Inspection.
- *Deputy Director of Inspection.*
- Assistant Director of Inspection.
- Assistant Engineer (Inspection).
- 2 Probationary Assistant Engineers (Inspection).
- 3 Apprentices.
- Head Draftsman.
- 5 Draftsmen.
- Tracer.
- Ferro-typer.

PROVINCIAL.

- CALCUTTA INSPECTION CIRCLE.
  - Controller of Inspection.
  - 2 Assistant Controllers of Inspection.
  - 13 Assistant Engineers (Inspection) and Inspectors of Stores.
  - *Personal Assistant to the Controller of Inspection.*
  - 18 Examiners.
  - Head Clerk.
  - Stenographer.
  - 46 Clerks.
  - *3 Checkers.*
  - Draftsman.
  - 2 Duftries.
  - 18 Peons.
  - Chowkidar.
- GOVERNMENT TEST HOUSE, ALIPORE.
  - Superintendent, Government Test House.
    - Physicist.
      - Assistant Engineer.
      - 8 Physical Assistants.
      - Foreman.
    - Head Clerk.
      - Stenographer.
      - Accountant.
      - 14 Clerks.
      - Storekeeper.
      - 4 Cement Laboratory Operators.
      - 5 Mistries.
      - 3 Fitters.
      - 14 Laboratory bearers.
      - 13 Laboratory Khalasies.
      - 2 Duftries.
      - 9 Peons.
      - *Peon.*
      - Chowkidar.
      - Mali.
    - Chemist.
      - Assistant Chemist.
      - 17 Chemical Assistants.
- METALLURGICAL INSPECTORATE.
  - Metallurgical Inspector.
  - Two Assistant Metallurgical Inspectors.
    - Physical.
      - 4 Inspectors.
      - 6 Examiners.
    - Head Clerk.
      - Accountant.
      - Stenographer.
      - 10 Clerks.
      - 2 Turning and Fitting Mistries.
      - Head Laboratory bearer.
      - 3 Laboratory bearers.
      - Duftry.
      - Head Peon.
      - 8 Peons.
      - *Peon.*
      - Mali.
    - Chemical.
      - Chemist.
      - 6 Chemical Assistants.
- MADRAS INSPECTION BRANCH.
  - Inspector-in-Charge.
  - 2 Clerks.
  - 2 Peons.
- BOMBAY INSPECTION CIRCLE.
  - CONTROLLER OF INSPECTION.
  - 6 Assistant Engineers (Inspection) and Inspector of Stores.
  - 9 Examiners.
  - Head Clerk.
  - Stenographer.
  - 23 Clerks.
  - *2 Clerks.*
  - Draftsman
  - Duftry.
  - 10 Peons.
  - Chowkidar.
  - Farash.
- GOVERNMENT TEST HOUSE, BOMBAY.
  - Physical Assistant.
  - Clerk.
  - Mistry.
  - Laboratory bearer.
  - Peon.
  - Chemical Assistant.
- CAWNPORE BRANCH.
  - Inspector-in-Charge.
  - Examiner.
  - 5 Clerks.
  - *2 Clerks.*
  - Duftry.
  - 4 Peons.
  - Chowkidar.
- UPPER INDIA CIRCLE.
  - Assistant Controller of Inspection.
  - 2 Assistant Engineers (Inspection).
  - Examiner.
  - Head Clerk.
  - Stenographer
  - 4 Clerks.
  - *Clerk.*
  - Duftry.
  - 4 Peons.
  - Farash.
- KARACHI AGENCY.
  - Assistant Controller of Inspection.
  - 2 Assistant Engineers (Inspection).
  - 4 Examiners.
  - Head Clerk.
  - Stenographer.
  - 15 Clerks.
  - *4 Clerks.*
  - Duftry.
  - 7 Peons.
  - Chowkidar.

LEAVE RESERVE (Technical).

- 2 Assistant Controllers of Purchase.
- 4 Assistant Engineers (Inspection) and Inspectors of Stores.
- 3 Examiners of Stores.
- 2 Chemical Assistants.
- Physical Assistant.

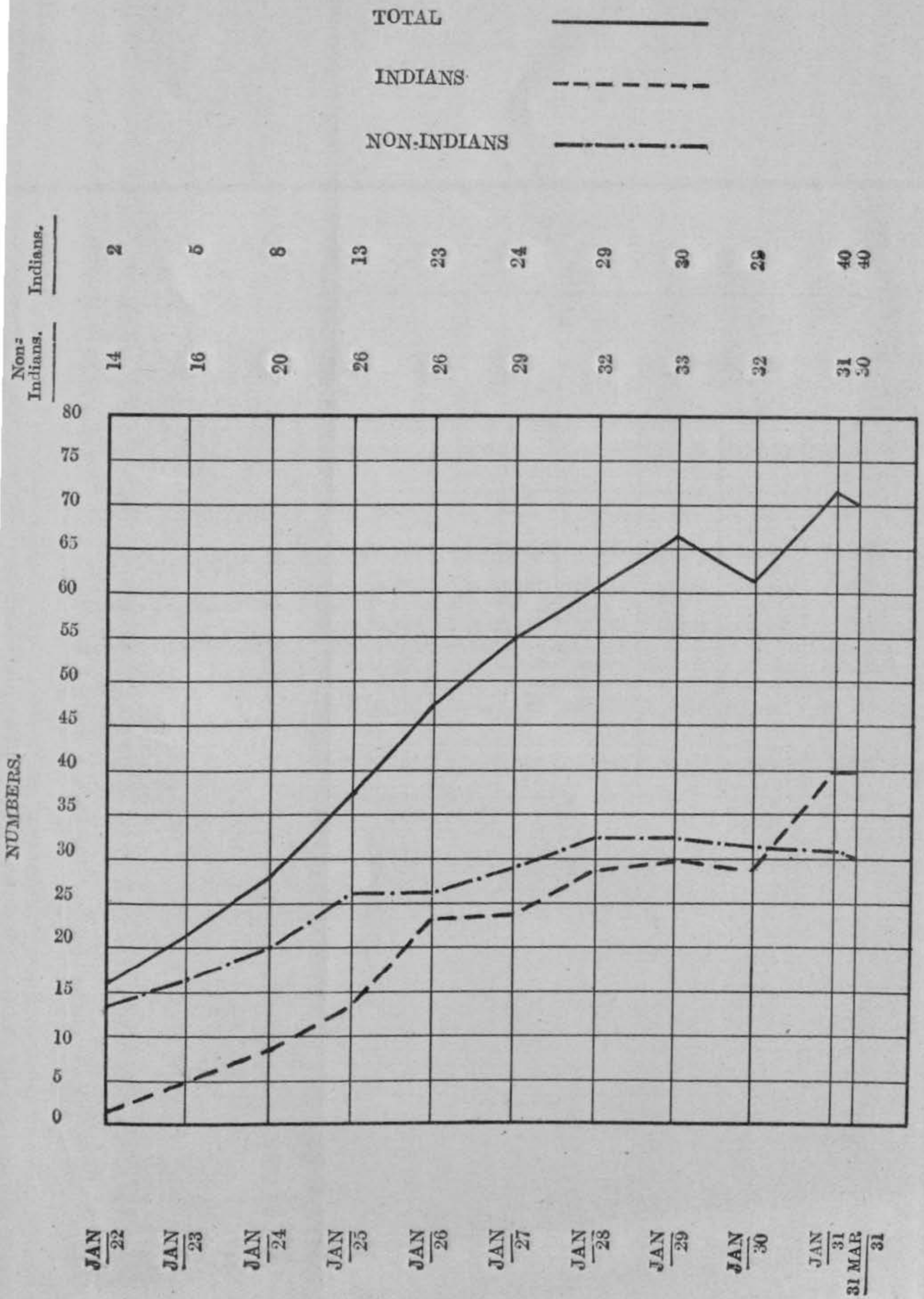
APPENDIX III.

INDIAN STORES DEPARTMENT.

Gazetted Staff.

Up to 31st March 1931

(*Vide* paragraph 16 of the report.)



APPENDIX IV.

Value of stores purchased and fees earned.

(*Vide* Paragraphs 18 and 31 of the Report.)

—	Value of Stores purchased.												Fees earned.			
	Textiles and leather stores.				Engineering and miscellaneous stores.				Total.							
	1927-28.	1928-29.	1929-30.	1930-31.	1927-28.	1928-29.	1929-30.	1930-31.	1927-28.	1928-29.	1929-30.	1930-31.	1927-28.	1928-29.	1929-30.	1930-31.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Calcutta Purchase Circle	5,95,629	4,45,860	4,87,072	4,43,673	15,52,508	13,38,265	17,45,584	21,32,027	21,48,137	17,84,125	22,32,656	25,75,700	21,481	17,841	22,327	25,757
Bombay Purchase Circle	2,61,934	1,98,031	1,09,457	2,37,686	8,63,474	9,16,673	8,79,966	13,22,451	11,25,408	11,14,704	9,89,423	15,60,137	11,254	11,147	9,924	15,601
Karachi Purchase Circle	39,304	67,811	81,166	43,227	13,35,043	14,55,097	19,38,726	14,25,490	13,74,347	15,22,908	20,19,892	14,68,717	13,744	15,229	20,199	14,707
Total Provincial Circles	8,96,867	7,11,702	6,77,695	7,24,586	37,51,025	37,10,035	45,64,276	48,79,968	46,47,892	44,21,737	52,41,971	56,04,554	46,479	44,217	52,450	56,065
Headquarters Purchase Branch.	1,09,85,142	1,09,13,271	1,06,58,597	91,12,571	2,16,71,638	2,07,13,066	2,70,25,133	2,29,65,571	3,26,56,780	3,16,26,337	3,76,83,730	3,20,78,142	3,26,568	3,16,263	3,76,837	3,20,781
Grand Total ..	1,18,82,009	1,16,24,973	1,13,36,292	98,37,157	2,54,22,663	2,44,23,101	3,15,89,409	2,78,45,539	3,73,04,672	3,60,48,074	4,29,25,701	3,76,82,696	3,73,047	3,60,480	4,29,287	3,76,846

APPENDIX V.

Statement showing the value of stores purchased on behalf of various authorities utilizing the services of the Indian Stores Department during the year 1930-31 and three preceding years. (Vide *paragraph 18 of the Report.*)

(*a*) Adjustments owing to cancellations of previous year's orders.

Serial No.	Organisation.	Purchases made during 1930-31.			Total for the year		
		Textiles and Leather.	Engineering, Hardware and Miscellaneous stores.	Total for the year.	1929-30.	1928-29.	1927-28.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
	CENTRAL—ARMY.						
1	Quartermaster General in India (including M. T.) ..	26,066	3,92,804	4,18,870	2,63,040	1,80,094	22,97,885
2	Master General of Ordnance	33,91,811	82,408	34,74,219	46,62,646	71,01,969	65,85,755
3	Military Engineer Services ..	38,782	56,60,486	56,99,268	64,09,311	53,31,542	56,13,237
4	Royal Indian Marine ..	31,963	8,02,061	8,34,024	4,54,327	5,77,541	5,38,912
5	Royal Air Force	5,766	95,115	1,00,881	1,02,494	81,733	5,56,737
6	General Staff Branch ..	..	..	..	..	..	18,492
7	Establishment Officer, Army Headquarters ..	..	..	..	..	..	35
8	Adjutant General in India ..	..	..	..	11	..	157
9	Officer Commanding, 10/4th Grenadiers, Ajmere ..	..	..	..	..	398	..
10	Commanding, K. G. O., Bengal Sappers and Miners ..	..	718	718	..	469	..
11	Brigade Major, Razmak ..	..	..	..	261	301	..
12	Military Accountant General	10	..	10	140	..	..
13	Officer Commanding, 1st Battalion, Royal Welsh Fusiliers, Quetta	..	220	220	..	..	..
	Total Central—Army ..	34,94,398	70,33,812	1,05,28,210	1,18,92,230	1,32,74,047	1,56,11,210

APPENDIX V—*contd.*

Serial No.	Organisation.	Purchases made during 1930-31.			Total for the year		
		Textiles and Leather.	Engineering, Hardware and Miscellaneous stores.	Total for the year.	1929-30.	1928-29.	1927-28.
	CENTRAL—CIVIL (*including minor administrations*).	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
14	Government of India, Secretariat and Attached Offices	54,078	20,239	74,317	69,611	3,026	33,508
15	Superintendent, Viceregal Estates	55	12,394	12,449	3,623	1,964	59
	Authorities subordinate to the Department of Industries and Labour.						
16	Indian Posts and Telegraphs Department	4,34,886	36,22,555	40,57,441	38,68,485	10,03,767	10,83,761
17	Geological Survey of India ..	1,157	50	1,207	2,077	278	..
18	Chief Inspector of Explosives with the Government of India	160	..	160	..	..	567
19	Printing and Stationery Department (India) ..	24,510	8,573	33,083	34,607	41,704	39,942
20	Meteorological Department	2,852	50,703	53,555	6,280	8,398	2,063
21	Mining Department ..	681	8,224	8,905	12,111	36,681	47,770
22	Central Public Works Department	17,038	10,64,085	10,81,123	9,16,397	11,60,075	9,53,475
23	Civil Aviation Department ..	927	1,58,370	1,59,297	3,15,721	..	..
24	Controller, Patents and Designs	156	1,239	1,395	..	..	..
	Total—Authorities subordinate to the Department of Industries and Labour ..	4,82,367	49,13,799	53,96,166	51,55,678	22,50,903	21,27,578
	Authorities subordinate to the Commerce Department.						
25	I. M. M. T. S. "Dufferin" ..	2,930	21,042	23,972	10,822	25,413	3,338
26	Chief Inspector of Lighthouses in India	27	2,13,929	2,13,956	..	..	..
	Total—Authorities subordinate to the Commerce Department	2,957	2,34,971	2,37,928	10,822	25,413	3,338

APPENDIX V—*contd.*

Serial No.	Organisation.	Purchases made during 1930-31.			Total for the year		
		Textiles and Leather.	Engineering, Hardware and Miscellaneous stores.	Total for the year.	1929-30.	1928-29.	1927-28.
	CENTRAL—CIVIL—*contd.*						
	Authorities subordinate to the Finance Department—contd.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
27	Northern India Salt Revenue	18,414	77,657	96,071	1,17,787	3,16,406	83,071
28	Customs Department ..	13,586	3,017	16,603	8,873	21,350	44,072
29	Income-tax Department ..	404	97	501	397	4,386	2,531
30	Audit and Accounts Department	2,501	12,223	14,724	1,909	1,414	1,280
31	Currency Department ..	18,897	4,787	23,684	491	26	4,612
32	His Majesty's Mints, Calcutta and Bombay	3,216	32,737	35,953	34,346	(a)—698	48,051
33	Security Printing Department	..	20,467	20,467	82,976	86,452	73,181
34	Opium Department ..	13,748	11,360	25,108	34,893	9,927	44,310
	Total—Authorities subordinate to the Finance Department	70,766	1,62,345	2,33,111	2,81,672	4,39,263	3,01,108
	Authorities subordinate to the Department of Education, Health and Lands.						
35	Archæological Department	539	1,258	1,797	713	2,400	17,798
36	Survey of India	94,496	2,580	97,076	1,04,610	59,951	1,03,358
37	Director-General, Indian Medical Services	2,91,809	..	2,91,809	43,953	3,73,323	2,19,411
38	Forests Department ..	..	7,926	7,926	5,426	8,413	1,355
39	Central Research Institute, Kasauli	..	..	..	563	8,525	..
40	Malaria Survey of India	..	..	..	230	21,824	..
41	Imperial Council of Agricultural Research	30,887	39,165	70,052	..	..	..
42	Agricultural Research Institute, Pusa	95	23,469	23,564	60,779	1,223	..

APPENDIX V—*contd.*

Serial No.	Organisation.	Purchases made during 1930-31.			Total for the year		
		Textiles and Leather.	Engineering, Hardware and Miscellaneous stores.	Total for the year.	1929-30.	1928-29.	1927-28.
	CENTRAL—CIVIL—*contd.* *Authorities subordinate to the Department of Education, Health and Lands*—concld.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
43	Veterinary Research Institute, Muktesar	6,938	18,474	25,412	14,122	12,950	14,310
44	Physiological Chemist, Bangalore	..	..	..	..	..	(a)—88
45	Royal Botanical Gardens ..	424	3,680	4,104	3,901	..	..
46	Botanical Survey of India ..	102	..	102	..	..	..
47	Government Cattle Farms ..	55	14,381	14,436	1,494	..	..
48	Protector of Emigrants, Bombay	15	..	15	..	31	..
49	Research Botanist and Laboratory	..	..	..	95	..	..
	Total—Authorities subordinate to the Department of Education, Health and Lands	4,25,360	1,10,933	5,36,293	2,35,886	4,88,640	3,56,320
	Authorities subordinate to the Foreign and Political Department.						
50	Hyderabad Residency ..	1,023	..	1,023	1,177	979	..
51	Mysore Residency ..	..	437	437	13	..	55
52	Persian Gulf Residency ..	..	1,592	1,592	107	..	78
53	Aden Residency	5,086	430	5,516	1,505	..	..
54	Central India Agency ..	3	..	3	12	1,903	1,641
55	Central India, Public Works Department	945	23,861	24,806	15,930	16,388	21,385
56	Rajputana Agency ..	360	29,307	29,667	9,759	541	10,476
57	Rajputana, Public Works Department	440	14,037	14,477	8,866	..	..
58	Western India States Agency	1,433	326	1,759	..	7,417	..
59	Punjab States Agency ..	..	12,812	12,812	..	26	..

APPENDIX V—*contd.*

Serial No.	Organisation.	Purchases made during 1930-31. Textiles and Leather.	Engineering, Hardware and Miscellaneous stores.	Total for the year.	Total for the year 1929-30.	1928-29.	1927-28.
	CENTRAL—CIVIL—*contd.* *Authorities subordinate to the Foreign and Political Department*—concld.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
60	Seistan and Kain Consulate..	..	..	..	263	263	..
61	British Envoy at the Court of Nepal	..	719	719	..	43	82
62	Political Agent, Gilgit ..	..	..	..	..	..	72
63	Political Agent, Loralai ..	..	..	..	..	18,615	..
64	Political Agent, Zhob, Fort Sandeman	..	74	74	..	..	..
65	Political Agent, Kathiawar ..	..	..	..	1,013	264	28
66	Political Agent, Sibi ..	..	372	372	50	..	..
67	Political Agent, Sambalpur	..	..	..	54	..	..
68	Political Agent, Mahikantha Sadra	..	1,380	1,380	..	..	..
69	Political Officer, Sikkim ..	..	..	..	1,635	2,618	..
70	Political Officer, Balipara Frontier Tracts, Lokra ..	2,470	100	2,570	..	425	..
71	Political Officer, Chagai ..	..	..	..	106	..	..
	Total—Authorities subordinate to the Foreign and Political Department ..	11,760	85,447	97,207	40,490	49,482	33,817
	Minor Local Administrations.						
72	N.-W. F. P. Revenue Department	..	1,419	1,419	5	30	324
73	N.-W. F. P. Agriculture Department	..	..	..	..	..	180
74	N.-W. F. P. Jail Department	..	..	..	21,696	1,156	..
75	N.-W. F. P. Police Department	90,430	1,209	91,639	76,641	48,096	61,772
76	N.-W. F. P. Public Works Department	126	1,58,451	1,58,577	44,960	85,379	2,118

APPENDIX V—*contd.*

Serial No.	Organisation.	Purchases made during 1930-31. Textiles and Leather.	Engineering, Hardware and Miscellaneous stores.	Total for the year.	Total for the year 1929-30.	1928-29.	1927-28.
	CENTRAL—CIVIL—*concld.*	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
	Minor Local Administrations—concld.						
77	N.-W. F. P. Medical and Public Health Departments	..	1,034	1,034	8,500	250	..
78	N.-W. F. P. Forest Department	..	16,011	16,011	..	..	..
79	Baluchistan Agency ..	..	129	129	8	89	2,563
80	Baluchistan, Public Works Department	..	6,325	6,325	1,96,028	11,985	17,119
81	Baluchistan Irrigation Department	172	5,639	5,811	.	..	..
82	Coorg Chief Commissioner ..	..	174	174	293	15,937	3,727
83	Coorg Forest Department ..	8,125	310	8,435	3,296	3,460	79
84	Coorg Public Works Department	..	4,074	4,074	34,166	595	73
85	Coorg Police Department ..	3,837	..	3,837	3,403	584	..
86	Education Department, Ajmer-Merwara	..	1,071	1,071	149	..	..
87	Forest Department, Ajmere..	..	32	32	..	..	..
88	Chief Commissioner, Delhi ..	..	3,614	3,614	..	347	..
89	Delhi Police Department ..	6,943	42	6,985	27,046	..	3,873
90	Delhi Medical and Health Department	476	6,898	7,374	144	..	..
91	Delhi Agriculture Department	..	142	142	..	..	..
92	Andamans Commission ..	47,708	2,05,093	2,52,801	2,75,965	4,05,559	2,33,944
93	Forest Officer, Andamans ..	..	57,905	57,905	2,56,851	10,269	..
94	Police Department, Andamans ..	..	..	..	6,358	..	..
95	Medical Department Andamans	..	6,650	6,650	..	..	..
96	Engineer and Harbour Master, Port Blair	..	3,710	3,710	66,000	..	..
	Total—Minor Local Administrations	1,57,817	4,79,932	6,37,749	10,21,509	5,83,736	3,25,772
	Total Central—Civil ..	12,05,160	60,20,060	72,25,220	68,19,291	38,42,316	31,81,133

APPENDIX V—*contd.*

Serial No.	Organisation.	Purchases made during 1930-31. Textiles and Leather.	Engineering, Hardware and Miscellaneous stores.	Total for the year.	Total for the year 1929-30.	1928-29.	1927-28.
	Railways—State-worked.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
97	North Western Railway ..	18,34,782	20,44,448	38,79,230	33,59,217	27,92,116	32,36,009
98	Eastern Bengal Railway ..	1,45,988	7,27,929	8,73,917	14,13,813	14,85,550	4,03,959
99	East Indian Railway ..	9,39,488	32,34,738	41,74,226	52,81,668	31,16,611	21,43,539
100	Great Indian Peninsula Railway	5,58,522	11,69,857	17,28,379	31,92,968	23,20,720	11,81,269
101	Burma Railways ..	1,73,880	8,64,609	10,38,489	5,51,036	86,769	17,320
102	Aden/Railways ..	..	..	..	..	543	273
103	Central Publicity Bureau, Indian State Railways ..	18	13,318	13,336	7,162	..	..
104	Railway Clearing Accounts Office	471	..	471	..	..	..
	Total State-worked Railways	36,53,149	80,54,899	1,17,08,048	1,38,05,864	98,02,309	69,82,369
	Railways—Company-worked.						
105	Assam Bengal Railway ..	22,896	54,911	77,807	2,74,158	3,40,387	2,10,555
106	Bombay, Baroda and Central India Railway ..	..	..	..	9,037	..	(*a*)-2,769
107	South Indian Railway ..	1,03,958	2,81,092	3,85,050	3,78,714	1,14,213	1,04,463
108	Bengal Nagpur Railway ..	43,463	1,492	44,955	1,25,638	..	14,341
109	Madras and Southern Mahratta Railway ..	..	5,75,189	5,75,189	4,39,776	1,39,139	1,20,148
110	Barsi Light Railway ..	..	..	..	..	..	13,125
	Total Company-worked Railways	1,70,317	9,12,684	10,83,001	12,27,323	5,93,739	4,59,863
	Railways—Worked by Indian States.						
111	Mysore Railways ..	..	..	..	2,527	2,231	1,14,512
112	Jodhpur Railway ..	..	6,793	6,793	10,715	469	..
113	H. E. H. The Nizam's State Railway	..	..	..	..	5,857	53,737
	Total Railways worked by Indian States ..	..	6,793	6,793	13,242	8,557	1,68,249
	Grand Total ..	38,23,466	89,74,376	1,27,97,842	1,50,46,429	1,04,04,605	76,10,481

APPENDIX V—*contd.*

Serial No.	Organisation.	Purchases made during 1930-31.			Total for the year		
		Textile and Leather.	Engineering, Hardware and Miscellaneous stores.	Total for the year 1930-31.	1929-30.	1928-29.	1927-28.
	PROVINCIAL.						
	Madras.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
114	Public Works Department ..	1,838	4,58,715	4,60,553	4,28,100	1,89,341	42,917
115	Agriculture Department ..	958	10,981	11,939	10,350	6,675	5,043
116	Forest Department ..	..	18,583	18,583	30	..	2,726
117	Police Department ..	1,31,330	11,769	1,43,099	1,736	6,613	8,487
118	Jail Department	24,281	3,904	28,185	9,418	14,763	13,878
119	Printing and Stationery Department	568	894	1,462	..	37	1,876
120	Education Department ..	..	535	535	71	32,878	389
121	Medical Department ..	20,333	35	20,368	14	..	14
122	Revenue Department ..	39	..	39	..	7	..
123	Judicial Department ..	..	1,405	1,405	..	10	..
124	Industries Department ..	..	27,277	27,277	..	..	..
125	Port Department	569	1,549	2,118	..	..	..
126	Pearl and Fisheries Department	168	..	168	..	..	..
	Total Madras ..	1,80,084	5,35,647	7,15,731	4,49,719	240,324	75,330
	Bombay.						
127	Public Works Department (Lloyd Barrage) ..	52,811	13,47,592	14,00,403	24,34,613	37,20,111	42,31,261
128	Public Works Department ..	404	3,58,080	3,58,484	1,39,190	2,42,463	2,71,132
129	Agriculture Department ..	25	6,492	6,517	2,840	..	..
130	Forest Department ..	7,711	32,833	40,544	32,086	18,056	20,572
131	Police Department ..	1,97,894	3,209	2,01,103	1,30,439	70,038	28,346

APPENDIX V—*contd.*

Serial No.	Organisation.	Purchases made during 1930-31.			Total for the year		
		Textiles and Leather.	Engineering, Hardware and Miscellaneous stores.	Total for the year 1930-31.	1929-30.	1928-29.	1927-28.
	PROVINCIAL—*contd.*						
	Bombay—contd.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
132	Prisons Department ..	1,62,450	24,009	1,86,459	2,07,044	1,67,741	97,104
133	Printing and Stationery Department	1,608	7,979	9,587	16,541	14,175	12,256
134	Development Department ..	..	..	..	5,117	9,505	3,365
135	Medical Department ..	490	11,297	11,787	839	3,506	3,155
136	Sanitary Department ..	..	83	83	4,188	5,297	19
137	Revenue Department ..	237	4	241	169	280	1,461
138	Salt and Excise Department	407	747	1,154	14,341	13,457	2,771
139	Education Department ..	..	16	16	8,693	..	..
140	Photozinco Department ..	2,001	..	2,001	..	..	..
141	Irrigation Department ..	151	3,955	4,106	..	..	..
142	Central Distillery, Nasik Road	620	12,473	13,093	..	..	..
143	Criminal Tribes Settlement Department	150	..	150	..	..	..
	Total Bombay ..	4,26,959	18,08,769	22,35,728	29,96,100	42,64,629	46,71,442
	Bengal.						
144	Public Works Department ..	..	30,516	30,516	51,868	4,93,533	2,18,184
145	Forest Department ..	2,911	2,111	5,022	12,785	3,950	1,294
146	Police Department ..	2,000	8,107	10,107	11,194	12,834	14,614
147	Jail Department	54	2,386	2,440	5,135	9,477	31,632
148	Education Department ..	..	174	174	1,978	8,929	204
149	Medical and Sanitary Department	..	638	638	488	1	12

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APPENDIX V—*contd.*

Serial No.	Organisation.	Purchases made during 1930-31. Textiles and Leather.	Engineering, Hardware and Miscellaneous stores.	Total for the year 1930-31.	Total for the year 1929-30.	1928-29.	1927-28.
	PROVINCIAL—*contd.*						
	Bengal—contd.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
150	Revenue Department ..	60	354	414	1,009	746	286
151	Judicial Department ..	..	57	57	313	21	88
152	Marine Department ..	..	..	..	..	..	5,826
153	Superintendent, Governor's Estate	..	55	55	..	237	3,634
154	Cinchona Cultivation ..	..	..	..	..	2,136	2,771
155	Printing Department ..	..	10,351	10,351	707	..	..
	Total Bengal ..	5,025	54,749	59,774	85,477	5,31,864	2,78,545
	United Provinces.						
156	Public Works Department ..	18	2,00,265	2,00,283	62,627	5,74,421	9,367
157	Forest Department ..	..	5,183	5,183	1,175	408	1,647
158	Printing Department ..	..	884	884	1,406	..	..
159	Revenue Department ..	..	..	..	2,413	..	..
160	Accounts Department ..	..	..	..	13	275	..
161	Judicial Department ..	..	35	35	..	..	5
162	Education Department ..	..	252	252	..	..	..
163	Police Department ..	..	562	562	391	..	..
164	Veterinary Department ..	..	..	..	149	..	..
165	Agriculture Department ..	..	643	643	..	..	..
166	Jail Department	773	39	812	..	..	..
167	Health Department ..	..	24	24	..	..	..
	Total United Provinces ..	791	2,07,887	2,08,678	68,174	5,75,104	11,019

APPENDIX V—*contd.*

Serial No.	Organisation.	Purchases made during 1930-31.			Total for the year		
		Textiles and Leather.	Engineering, Hardware and Miscellaneous stores.	Total for the year 1930-31.	1929-30.	1928-29.	1927-28.
	PROVINCIAL—*contd.*						
	Punjab.	Bs.	Rs.	Rs.	Rs.	Rs.	Rs.
168	Public Works Department (including Sutlej Valley Project)	37,128	14,25,580	14,62,708	18,15,003	11,83,767	34,59,998
169	Public Works Department (Hydro-Electric Branch) ..	4,032	5,60,472	5,64,504	6,86,548	4,52,267	6,78,123
170	Agriculture Department ..	2,010	12,437	14,447	25,001	24,348	17,805
171	Veterinary Department ..	352	2,620	2,972	3,068	1,777	350
172	Forest Department ..	..	3,943	3,943	5,378	5,630	335
173	Police Department ..	51,695	2,155	53,850	29,146	58,257	36,615
174	Jail Department	2,81,403	13,894	2,95,297	6,12,255	5,07,088	2,53,791
175	Printing Department ..	..	..	..	100	..	..
176	Education Department ..	395	3,716	4,111	6,029	400	7,705
177	Industries Department ..	426	42,918	43,344	(a) —3,195	20,272	1,60,634
178	Public Health and Sanitary Departments	14	2,337	2,351	20	128	754
179	Punjab Secretariat ..	..	..	..	11	..	..
180	Revenue Department ..	..	71	71	331	422	919
181	Judicial Department ..	..	20	20	..	..	50
182	Registration Department ..	..	..	..	57	..	..
183	Unclassified items ..	..	..	..	..	..	18,895
	Total Punjab ..	3,77,455	20,70,163	24,47,618	31,79,752	22,54,356	46,35,974

APPENDIX V—*contd.*

Serial No.	Organisation.	Purchases made during 1930-31.			Total for the year		
		Textiles and Leather.	Engineering, Hardware and Miscellaneous stores.	Total for the year 1930-31.	1929-30.	1928-29.	1927-28.
	PROVINCIAL—*contd.* *Bihar and Orissa.*	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
184	Public Works Department ..	662	1,06,317	1,06,979	74,201	21,465	43,092
185	Agriculture Department ..	8	3,391	3,399	1,246	386	266
186	Police Department ..	545	318	853	198	319	226
187	Jail Department	30,168	12,629	42,797	7,005	4,058	5,486
188	Printing Department ..	1,520	1,389	2,909	214	4,378	1,374
189	Industries Department ..	..	11,484	11,484	..	..	135
190	Education Department ..	136	2,011	2,147	6,627	1,413	2,673
191	Public Health and Medical Departments	..	3,947	3,947	..	..	..
192	Registration Department ..	..	992	992	..	..	..
193	Forest Department ..	5	110	115	..	..	..
194	Reformatory School ..	..	261	261	..	..	..
	Total Bihar and Orissa .	33,044	1,42,839	1,75,883	89,491	32,019	53,252
	Burma.						
195	Public Works Department ..	18	1,071	1,089	16,482	9,970	2,011
196	Police Department ..	1,81,214	1,531	1,82,745	50,828	(*a*)-6,563	6,80,941
197	Jail Department	4,382	..	4,382	3,244	3,075	2,690
198	Printing Department ..	3,665	488	4,153	2,025	7,037	6,952
199	Marine Department ..	..	..	..	8,658	..	192
200	Salt Revenue Department ..	..	..	..	416	..	..
201	Medical Department ..	..	..	..	2,171	..	..
	Total Burma ..	1,89,279	3,090	1,92,369	83,824	13,519	6,92,786

APPENDIX V—*contd.*

Serial No.	Organisation.	Purchases made during 1930-31. Textiles and Leather.	Engineering, Hardware and Miscellaneous stores.	Total for the year 1930-31.	Total for the year 1929-30.	1928-29.	1927-28.
	PROVINCIAL—*contd.* *Central Provinces.*	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
202	Public Works Department ..	251	74,764	75,015	1,67,127	1,73,544	1,01,189
203	Forest Department ..	1,700	2,621	4,321	1,379	585	1,459
204	Jail Department	3,256	1,559	4,815	4,810	2,967	7,844
205	Industries Department ..	..	6,911	6,911	4,701	10,658	6,223
206	Medical Department ..	4,552	331	4,883	892	595	519
207	Agriculture Department ..	..	..	..	2,037	3,134	325
208	Revenue Department ..	..	237	237	508	1,369	1,646
209	Sanitary (Health) Department	..	11	11	..	..	..
210	Education Department ..	15	1,279	1,294	..	594	..
211	Judicial Department ..	115	73	188	380	311	300
212	Printing Department ..	..	..	..	..	..	313
213	Police Department ..	..	618	618	..	2,524	824
214	Central Provinces Secretariat	..	..	..	..	..	138
215	Co-operative Department ..	..	16	16	28	..	..
216	Veterinary Department ..	..	279	279	..	..	..
	Total Central Provinces ..	9,889	88,699	98,588	1,81,862	1,96,512	1,20,780
	Assam.						
217	Public Works Department ..	2,857	15,562	18,419	1,74,640	11,568	41,272
218	Forest Department ..	1,479	71	1,550	1,463	2,300	1,301
219	Police Department ..	57,325	2,287	59,612	76,155	47,676	78,768
220	Jail Department	10,336	1,297	11,633	11,190	9,313	28,366
221	Printing Department ..	..	..	..	243	..	..
222	Education Department ..	32	25	57	20	2,622	401
223	Industries Department ..	..	2,720	2,720	13,606	..	..
224	Medical Department ..	..	765	765	..	80	78

APPENDIX V—*contd.*

Serial No.	Organisation.	Purchases made during 1930-31. Textiles and Leather.	Engineering, Hardware and Miscellaneous stores.	Total for the year 1930-31.	Total for the year 1929-30.	1928-29.	1927-28.
	PROVINCIAL—*concld.* *Assam*—concld.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
225	Assam Secretariat ..	..	..	..	19	..	..
226	Revenue Department ..	43	100	143	415	481	496
227	Political Department ..	..	..	..	413	..	..
228	Agricultural Department ..	..	2,565	2,565	..	..	..
	Total Assam ..	72,072	25,392	97,464	2,78,164	74,040	1,50,682
229	Provincial Unclassified items	16,277	..	16,277	29,529	..	..
	Total Provincial ..	13,10,875	49,37,235	62,48,110	74,42,092	81,82,367	1,06,89,811
	INDIAN STATES.						
230	Jammu and Kashmir ..	..	..	..	..	..	6,785
231	Jaipur	..	6,84,277	6,84,277	14,19,496	1,65,099	41,843
232	Mysore	..	..	..	..	15,418	13,157
233	Bahawalpur	..	41,209	41,209	1,35,185	26,453	5,500
234	Palanpur	..	..	..	..	..	213
235	H. E. H. the Nizam's Government	2,418	4,545	6,963	2,834	28	2,474
236	Jamkhandi	..	1,849	1,849	1,063	..	..
237	Indore	..	795	795	..	..	..
238	Gwalior	..	18,438	18,438	..	..	
239	Patiala ..	247	..	247	..	..	..
	Total Indian States ..	2,665	7,51,113	7,53,778	15,58,578	2,06,998	69,972
	QUASI-PUBLIC BODIES.						
240	City Board, Mussoorie ..	..	16,816	16,816	15,413	31,112	3,461
241	City Board, Dehra Dun ..	..	..	..	..	..	44,364
242	Municipal Committee, Bannu	..	112	112	204	175	..
243	Municipal Committee, Simla	..	39,888	39,888	85,095	62,167	87,038
244	Municipal Committee, Kurnool	..	..	..	992	..	..

APPENDIX V—*contd.*

Serial No.	Organisation.	Purchases made during 1930-31.			Total for the year		
		Textiles and Leather.	Engineering, Hardware and Miscellaneous stores.	Total for the year. 1930-31.	1929-30.	1928-29.	1927-28.
	QUASI-PUBLIC BODIES—*contd.*	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
245	Municipal Committee, Delhi	..	..	..	..	87	4,638
246	Municipal Committee, Trichinopoly	..	..	..	1,184	..	..
247	Municipal Committee, Karachi	..	18,256	..	21,520	27,785	..
248	Municipal Committee, Sukkur	..	26,192	26,192	17,692	10,805	..
249	Municipal Committee, Mount Abu	..	171	171	591	..	..
250	Municipal Committee, Ootacamund	..	..	..	824	824	..
251	Municipal Committee, Lahore	..	5,171	5,171	..	..	..
252	District Board, Dera Ismail Khan	..	..	..	..	..	551
253	Port Commissioners, Calcutta	..	..	..	..	324	..
254	Port Trust, Madras ..	..	1,22,725	1,22,725	6,666	2,010	2,014
255	Union Board, Manikganj ..	..	..	..	..	185	..
256	Lac Research Institute, Ranchi	..	180	180	445	1,728	..
257	Health Association, Calcutta	..	..	..	..	308	..
258	District Council, Chindwara	..	..	..	..	231	..
259	District Council, Bhandara	..	..	..	56	..	..
260	District Council, Yeotmal ..	162	138	300	24	..	..
261	District Council, Balaghat ..	..	..	..	61	..	..
262	District Council, Raipur ..	..	..	..	72	..	..
263	District Council, Amraoti ..	..	180	180	43	..	..
264	District Council, Buldana ..	..	507	507	..	..	..
265	District Council, Narsinghpur	..	56	56	..	..	..
266	Sind Flood Relief Committee	..	..	..	2,312	..	..
267	Commandant, Tochi Scouts, Miranshah ..	110	1,341	1,451	..	..	..

APPENDIX V—*concld.*

Serial No.	Organisation.	Purchases made during 1930-31. Textiles and Leather.	Engineering, Hardware and Miscellaneous stores.	Total for the year 1930-31.	Total for the year 1929-30.	1928-29.	1927-28.
	QUASI-PUBLIC BODIES—*concld.*	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
268	Municipal Authority, Allahabad Cantonment ..	321	..	321	..	..	..
	Total Quasi-Public bodies ..	593	1,25,127	1,25,720	1,53,194	1,37,741	1,42,066
	BRITISH GOVERNMENT.						
269	Royal Airship Base, Karachi	..	3,816	3,816	7,947	..	..
270	Air Ministry Works, Aden ..	..	..	..	5,940	..	..
	Total British Government ..	..	3,816	3,816	13,887	..	..
	ABSTRACT.						
	Central, Army	34,94,398	70,33,812	1,05,28,210	1,18,92,230	1,32,74,047	1,56,11,210
	Central, Civil	12,05,160	60,20,060	72,25,220	68,19,291	38,42,316	31,81,133
	Railways, State-worked ..	36,53,149	80,54,899	1,17,08,048	1,38,05,864	98,02,309	69,82,369
	Railways, Company-worked	1,70,317	9,12,684	10,83,001	12,27,323	5,93,739	4,59,863
	Railways, Indian State-worked	..	6,793	6,793	13,242	8,557	1,68,249
	Total Railways ..	38,23,466	89,74,376	1,27,97,842	1,50,46,429	1,04,04,605	76,10,481
	Provincial Governments ..	13,10,875	49,37,235	62,48,110	74,42,092	81,82,367	1,06,89,810
	Indian States	2,665	7,51,113	7,53,778	15,58,578	2,06,998	69,972
	Quasi-Public bodies ..	593	1,25,127	1,25,720	1,53,194	1,37,741	1,42,066
	British Government ..	..	3,816	3,816	13,887	..	..
	GRAND TOTAL ..	98,37,157	2,78,45,539	3,76,82,696	4,29,25,701	3,60,48,074	3,73,04,672

APPENDIX VI.

Statement showing the value of the various classes of purchases (indigenous and imported separately) made during the year 1930-31 as compared with three previous years.

(*Vide* paragraphs 18 and 26 of the report.)

—	1930-31.	1929-30.	1928-29.	1927-28.
I.—*Textiles and Leather.*	Rs.	Rs.	Rs.	Rs.
(a) Stores purchased in the Indian market—				
(i) Cotton—				
Indigenous	51,11,441 (94·8%)	56,76,743 (97·4%)	60,62,761 (96·3%)	66,28,109 (96·4%)
Imported	2,78,346 (5·2%)	1,53,252 (2·6%)	2,35,184 (3·7%)	2,45,409 (3·6%)
(ii) Woollen—				
Indigenous	34,84,458 (95·6%)	39,09,782 (92·7%)	39,31,597 (99·1%)	36,81,336 (99·5%)
Imported	1,59,592 (4·4%)	3,05,959 (7·3%)	37,148 (0·9%)	19,656 (0·5%)
(iii) Jute, hemp, etc.—				
Indigenous	6,72,083 (94·2%)	12,31,202 (97·7%)	12,88,918 (96·6%)	11,56,483 (91·1%)
Imported	41,558 (5·8%)	29,144 (2·3%)	45,454 (3·4%)	1,13,179 (8·9%)
(iv) Leather—				
Indigenous	65,387 (90·7%)	23,506 (86·7%)	17,613 (77·8%)	25,063 (95·5%)
Imported	6,676 (9·3%)	3,595 (13·3%)	5,025 (22·2%)	1,177 (4·5%)
Total { Indigenous ..	93,33,369 (95·%)	1,08,41,233 (95·7%)	1,13,00,889 (97·2%)	1,14,90,991 (96·8%)
Total { Imported ..	4,86,172 (5 %)	4,91,950 (4·3%)	3,22,811 (2·8%)	3,79,421 (3·2%)
Total ..	98,19,541	1,13,33,183	1,16,23,700	1,18,70,412
(b) Stores purchased from Government Departments ..	17,616	3,109	1,273	11,597
Total textiles and leather ..	98,37,157	1,13,36,292	1,16,24,973	1,18,82,009
II.—*Engineering and Miscellaneous Stores.*				
(a) Stores purchased in the Indian market	2,77,86,082	3,15,76,652	2,43,26,784	2,54,18,062
(b) Stores purchased direct from outside India	56,964	..	25,500	..
(c) Stores purchased from Government Departments ..	2,493	12,757	70,817	4,601
Total Engineering and Miscellaneous Stores ..	2,78,45,539	3,15,89,409	2,44,23,101	2,54,22,663
GRAND TOTAL ..	3,76,82,696	4,29,25,701	3,60,48,074	3,73,04,672

APPENDIX VII.

Value in rupees of Stores purchased in each province during the year 1930-31 and three preceding years.

(*Vide* paragraphs 18 and 28 of the Report.)

Class of material and province in which purchased.	1930-31.	1929-30.	1928-29.	1927-28.
	Rs.	Rs.	Rs.	Rs.
Cotton materials—				
United Provinces ..	20,06,836	27,80,063	22,44,072	20,39,623
Bombay	15,34,877	12,01,524	9,05,988	18,77,245
Madras	8,45,715	9,09,350	12,02,804	12,32,173
Bengal	6,61,909	6,16,830	7,57,651	8,30,392
Punjab	2,22,471	98,192	4,31,356	3,49,248
Delhi	1,11,601	2,23,005	7,36,265	5,35,583
Burma	3,150	..	..	—2,200
Central Provinces ..	3,125	..	12,310	11,454
Jaipur	103	..	..	..
Bihar and Orissa ..	..	1,031	..	..
Baroda	..	..	5,126	..
Mysore	..	..	2,373	..
Total—Cotton materials ..	53,89,787	58,29,995	62,97,945	68,73,518
Woollen materials—				
United Provinces ..	17,20,446	7,46,597	14,24,254	7,53,845
Madras	7,40,986	10,40,313	2,06,541	6,14,104
Punjab	5,59,242	6,52,791	9,08,900	6,44,218
Bombay	3,32,494	10,91,841	10,86,474	12,01,021
Bengal	2,81,600	5,43,239	3,06,473	4,70,099
Mysore	9,282	..	..	..
Kashmir	..	1,38,902	..	..
Delhi	..	2,058	36,103	17,705
Total—Woollen materials	36,44,050	42,15,741	39,68,745	37,00,992
Jute, flax and hemp materials—				
Bengal	6,34,942	11,76,276	11,41,154	9,96,626
Bombay	50,993	67,630	73,357	1,53,427
United Provinces ..	12,399	4,144	88,334	6,104
Punjab	10,209	1,590	10,470	98,998
Delhi	5,098	10,076	18,289	6,694
Madras	..	630	2,768	..
Burma	..	..	..	7,813
Total—Jute, flax and hemp materials.	7,13,641	12,60,346	13,34,372	12,69,662

Class of goods and province in which purchased.	1930-31.	1929-30.	1928-29.	1927-28.
	Rs.	Rs.	Rs.	Rs.
Leathergoods—				
United Provinces ..	35,030	21,070	9,564	7,408
Bengal..	18,885	3,253	1,856	11,261
Madras	12,332	383	440	744
Bombay	3,438	4,409	4,908	2,253
North-West Frontier Province	1,800	..	..	..
Gwalior	486	..	300	797
Punjab	92	—2,014	5,570	3,777
Total—Leather goods ..	72,063	27,101	22,638	26,240
Engineering, Hardware and misc. Stores—				
Bombay	1,14,14,108	1,20,74,685	1,02,63,817	1,21,58,801
Bengal..	1,11,81,095	1,50,31,422	1,12,69,682	1,14,65,987
Punjab	18,01,754	19,86,318	14,23,484	1,41,700
Madras	10,09,347	3,40,438	3,25,207	3,17,872
Burma..	8,53,617	4,03,108	80,336	41,869
United Provinces ..	8,26,440	7,36,335	1,87,367	5,46,948
Delhi	4,58,387	3,53,232	5,38,494	5,88,544
Assam	1,17,600	..	4,222	1,445
Mysore	87,529	3,56,604	..	..
Central Provinces ..	19,206	61,187	44,178	75,854
Bihar and Orissa ..	15,742	2,33,323	1,89,456	79,042
Hyderabad	889	..	..	..
Ajmer-Merwara ..	368	..	..	..
Aundh State	..	..	541	..
Total—Engineering, Hardware and misc. Stores.	2,77,86,082	3,15,76,652	2,43,26,784	2,54,18,062
Total—				
Bombay	1,33,35,910	1,44,40,089	1,23,34,544	1,53,92,747
Bengal..	1,27,78,431	1,73,71,020	1,34,76,816	1,37,74,365
United Provinces ..	46,01,151	42,88,209	39,53,591	33,53,928
Madras	26,08,380	22,91,114	17,37,760	21,64,893
Punjab	25,93,768	27,36,877	27,79,780	12,37,941
Burma..	8,56,767	4,03,108	80,336	47,482
Delhi	5,75,086	5,88,371	13,29,151	11,48,526
Assam	1,17,600	..	4,222	1,445
Mysore	96,811	3,56,604	2,373	..
Central Provinces ..	22,331	61,187	56,488	87,308
Bihar and Orissa ..	15,742	2,34,354	1,89,456	79,042
North-West Frontier Province	1,800	..	..	..
Hyderabad	889	..	..	..
Gwalior	486	..	300	797
Ajmer-Merwara ..	368	..	..	..
Jaipur	103	..	..	..
Kashmir	..	1,38,902	..	..
Baroda	..	..	5,126	..
Aundh State	..	..	541	..
GRAND TOTAL ..	3,76,05,623	4,29,09,835	3,59,50,484	3,72,88,474

APPENDIX VIII.

LISTS OF ITEMS OF STORES PURCHASED ON "RATE" AND "RUNNING" CONTRACTS.
(*Vide* paragraph 30 of the Report.)

A.—Items of stores for which "Rate" and "Running" contracts were entered into by the Headquarters office during the year 1930-31.

TEXTILE STORES.

(Cotton).

1. Bags, waterproof, drill, delivery.
2. Bandage cloth, bleached.
3. Capes and Coats, waterproof.
4. Cotton waste, white and coloured.
5. Dosuti cloth.
6. Drill, cotton, blue, khaki, white and grey.
7. Durries.
8. Dusters, dosuti, grey.
9. Gauze, absorbent, cotton, white.
10. Haversacks.
11. Holland cloth.
12. Lining cloth.
13. Long cloth, bleached.
14. Madapalam cloth.
15. Nainsook (Muslin), bleached.
16. Pugree cloth, white, khaki, red and blue.
17. Pugries, blue, with proof ends.
18. Putties, cotton.
19. Sacks, drill, khaki.
20. Sheeting cloth, unbleached.
21. Sheets, bed, bleached.
22. Silicia cloth, black.
23. Tape, cotton, newar and tape, stay, linen
24. Thread, cotton, sewing and cabled.
25. Ticken cloth.
26. Towels.
27. Twill, cotton, khaki.
28. Twine, cotton, grey.
29. Twist cotton for wicks.
30. Umbrellas.
31. Waterproof cloth.
32. Wicks, tape, cotton.
33. Wool, cotton, absorbent.

A.—Items of stores for which "Rate" and "Running" contracts were entered into by the Headquarters office during the year 1930-31—contd.

(Woollen).

34. Blankets.
35. Broad cloth, superfine.
36. Bunting, red and green.
37. Caps. balaclava.
38. Flannel.
39. Jackets, cardigan.
40. Jerseys.
41. Overcoats made up of blanketting cloth.
42. Serges, of colours.
43. Twill cloth of colours.
44. Wool, sheep, stuffing.

(Jute, Hemp and Miscellaneous).

45. Bags, mail, flax proofed and unproofed.
46. Buttons, gold.
47. Lace, gold.
48. Neckgear, gold.
49. Paulins, flax.
50. Ropes, manilla, hemp.
51. Tassels, gold.

ENGINEERING AND MISCELLANEOUS STORES.

52. Accumulators, small, for Telegraphs Department.
53. Acids.
54. Alumina Ferric.
55. Asbestos cement sheets.
56. Badges, brass, arm, for P. W. D.
57. Ball, roller and timber bearings.
58. Bearing metals, high and low grades.
59. Bells, electric, trembling.
60. Boards, distribution.
61. Boards, fuse.
62. Brushes for cleaning stamps, etc., and bannister.
63. Buttons, brass, for Police Department, Bombay.
64. Buttons, gilt, brass.
65. Cables, V. I. R. insulated braided, single core, 600 megohm grade.
66. Cables, vulcanized India rubber, insulated, cabtyre sheathed, single core, twin core, flat and circular, and three core flat and circular 600 megohm grade.
67. Cables, vulcanized India rubber, insulated, lead sheathed, single core, twin core flat and circular, and three core circular, 600 megohm grade.
68. Cable, flame-proof, single core, vulcanized India rubber, insulated, 600 megohm grade.

A.—Items of stores for which "Rate" and "Running" contracts were entered into by the Headquarters office during the year 1930-31—contd.

ENGINEERING AND MISCELLANEOUS STORES—*contd.*

69. Candles, carriage.
70. Carbonic acid gas. (C. O. 2).
71. Carsac elements for Telegraphs Department.
72. Carsac elements for G. I. P. Railway.
73. Cash chests, iron.
74. Ceiling roses.
75. Cells, caustic soda, Edison type, 500 amps.
76. Cells, dry, inert, sizes 19 and 21 for Telegraphs Department.
77. Cells, dry, insert (Siemens Bros. Nos. 55 and 60).
78. Cells, wet "A. D.", Carbon and Zinc elements for G. I. P. Railway.
79. Cement.
80. Cleats, porcelain.
81. Conduits, pipes and fittings of sizes.
82. Cooking ranges.
83. Cords, flexible, twin core, cotton and silk braided, 600 megohm grade.
84. Cords, flexible, twin core, workshop finish, 600 megohm grade.
85. Cords, flexible, two and three core, cabtyre sheathed, 600 megohm grade.
86. Cords, flexible, four core as an earthing core, cabtyre sheathed, 600 megohm grade.
87. Creosote.
88. Cut outs, Porcelain and Iron clad.
89. Cutlery articles.
90. Disinfectants.
91. Fans, electric, ceiling, A. C. and D. C.
92. Fans, electric, table, A. C. and D. C.
93. Fire extinguishers.
94. Fuses, iron clad, single pole.
95. Gold leaf.
96. Graphite, country, suitable for foundry work, with both iron and brass casting.
97. Handcuffs.
98. Insulating materials:—
    (a) Compound tropical high melting.
    (b) India rubber strips, pure para.
    (c) Ruby mica.
    (d) Tape, cotton, Egyptian, of sizes.
    (e) Tape, adhesive, black.
    (f) Varnish, insulating, air drying and stoving "Chmaline".
99. Jars, glass, for Leclanche and Minotti batteries for Telegraphs Department.

A.—Items of stores for which "Rate" and "Running" contracts were entered into by the Headquarters office during the year 1930-31—contd.

ENGINEERING AND MISCELLANEOUS STORES—*contd.*

100. Jars. earthenware, for Leclanche cells for G. I. P. Railway.
101. Lamp brackets.
102. Lamp holders.
103. Lamps, electric, automobile.
104. Lamps, electric, carbon filament.
105. Lamps, electric, Locomotive.
106. Lamps, electric, metal filament, gas-filled type.
107. Lamps, electric, metal filament, vacuum type.
108. Lamps, electric, metal filament, train lighting, gas-filled type.
109. Lamps, electric, metal filament, train lighting, vacuum type,
110. Lanterns.
111. Leather reviver.
112. Liquid chlorine.
113. Liquid driers.
114. Liquid wood filler.
115. Locks.
116. Metal polish.
117. Meters, electric, house service, alternating current, watt hour, single phase, two wire.
118. Meters, electric, house service, direct current, ampere hour, two wire.
119. Meters, water.
120. Modules, Crumps, adjustable, proportional.
121. Motor cars, Chevrolet, trucks and truck bodies, spare parts, etc.
122. Meters, cars, Ford, trucks, etc.
123. Oil, castor.
124. Oil, cocoanut.
125. Oil, fuel.
126. Oil, kerosene, including machinery, cleaning and gas making.
127. Oil, linseed, double boiled.
128. Oil, linseed, raw.
129. Oils, lubricating and greases.
130. Oxygen gas.
131. Paint remover.
132. Paints, stiff and ready mixed and dry pigments.
133. Paste driers.
134. Petrol.
135. Pipes and fittings, cast iron.
136. Pipes, galvanized mild steel (water and gas qualities).

A.—Items of stores for which "Rate" and "Running" contracts were entered into by the Headquarters office during the year 1930-31—contd.

ENGINEERING AND MISCELLANEOUS STORES—*contd.*

137. Pipes, mild steel (steam quality).

138. Pipes, stoneware.

139. Plates, enamel, letter-box.

140. Plugs, wall, and sockets.

141. Poles, steel, tubular, Mannesmann type, of sizes.

142 Polish, French.

143. Powder, filling up.

144. Pumice powder.

145. Pumice rubbing blocks.

146. Pumice stone.

147. Road dressing materials.

148. Safes, burglar and fire-proof.

149. Safes, light quality, burglar proof.

150. Seals, lead, for closing mail bags.

151. Shade carriers.

152. Shades, enamelled iron, and white, conic, opal.

153. Shades, vellum, for table standards.

154. Shellac.

155. Sleepers, sal and deodar.

156. Sluice valves, water.

157. Soaps, soft and hard.

158. Sodium fluosilicate.

159. Spare parts for Canadian Ford Models "T" and "TT", A, AA and AAC.

160. Spare parts for Thornycroft "AA" type medium, six-wheeled lorries.

161. Standards, table, electric.

162. Steel sections.

163. Sulphate of alumina.

164. Sulphate of copper.

165. Switches, tumbler, single and double pole, house wiring and train lighting.

166. Switches with fuses, iron clad, double pole.

167. Tallow.

168. Tar, coal, for painting purposes.

169. Target apparatus.

170. Trays, paper.

171. Turpentine, genuine.

172. Turpentine, substitute.

173. Tyres and tubes, bicycle.

A.—Items of stores for which "Rate" and "Running" contracts were entered into by the Headquarters office during the year 1930-31—concld.

ENGINEERING AND MISCELLANEOUS STORES—*concld.*

174. Varnishes.
175. Voltoids, (Sal-Ammoniac).
176. Wire copper, bare, solid, hard drawn.
177. Wire, soft, for fuses.
178. Wire, single and double cotton covered.
179. Wire, double silk, covered.
180. Wire, enamelled.
181. Wire, Eureka, resistances.
182. Wire, gauze, brass, rustless.
183. Wood preservative.
184. Zincs, semi-circular, for Leclanche cells.

B.—Contracts entered into by the Controller of Purchase, Calcutta Circle.

TEXTILE STORES.

1. Bags, gunny.
2. Bags, twill, Liverpool.
3. Blankets, superior.
4. Buttons, brass.
5. Buttons, nickel.
6. Canvas, cotton and jute.
7. Caps, uniform.
8. Cases, pillow, cotton.
9. Cloth, bandage.
10. Cloth, calico.
11. Cloth, drill, bleached.
12. Cloth, drill, blue.
13. Cloth, drill, khaki.
14. Cloth, *dungaree*, white.
15. Cloth, *eksuty*.
16. Cloth, hessian.
17. Cloth, *kharooa*.
18. Cloth, painting.
19. Cotton, waste, coloured.
20. Cotton, waste, white, teased and unteased.
21. Covers, pillow.
22. Curtains, mosquito.
22. Dusters.
24. Jute, Dressed.

B.—Contracts entered into by the Controller of Purchase, Calcutta Circle—contd.

TEXTILE STORES—*concld.*

25. Line, fish.
26. Line, log.
27. Nets, mosquito.
28. Pillows, cotton.
29. Rope, coir.
30. Rope, coir, oiled.
31. Rope, manilla.
32. Twine, hemp.
33. Twine, jute, ordinary and 3 ply.
34. Twine, sewing, sailmakers'.
35. Umbrellas, ordinary.
36. Umbrellas, trolly.

ENGINEERING AND MISCELLANEOUS STORES.

37. Acid, sulphuric.
38. Belting, balata.
39. Brooms, cocoanut.
40. Brush, sashtool.
41. Brushes, boot polishing.
42. Brushes, flat, paint and varnish.
43. Brushes, form.
44. Bru hes, wire.
45. Chain, iron, short link.
46. Clocks, drop, octagon.
47. Cloth, emery.
48. Cloth, glass.
49. Cooking ranges.
50. Cords, elastic.
51. Crockery.
52. Cutlery.
53. Fittings, water, brass and gunmetal.
54. Flour, fine.
55. Glassware.
56. Handles, hammer.
57. Hinges, steel.
58. Holders. tin, steel.
59. Oil, blancol.
60. Oil, castor.

B.—Contracts entered into by the Controller of Purchase, Calcutta Circle—concld.

ENGINEERING AND MISCELLANEOUS STORES—*concld.*

61. Oil, kerosene.
62. Panes, glass.
63. Paper, glass.
64. Shellac.
65 Time-pieces, large and small.

C.—Contracts entered into by the Controller of Purchase, Bombay Circle.

TEXTILE STORES.

1. Balls, cotton.
2. Chord, asbestos, packing.
3. Cloth, calico, bleached.
4. Cloth, calico, Napthol, red.
5. Cloth, drill, bleached.
6. Cloth, long, bleached.
7. Cloth, sheeting, bleached and unbleached.
8. Coir, loose, dry, clean.
9. Coir, yarn, dry and special.
10. Cotton, clean.
11. Linen, chalk, cotton.
12. Oakum, white and black.
13. Wicks, cotton, tape, of sizes, for mineral oil.

ENGINEERING AND MISCELLANEOUS STORES.

14. Batteries, dry, " Ever-ready ".
15. Batteries dry, " Ever-ready " for telephone purposes.
16. Blocks, rubber, mercury.
17. Brooms, bass and hair, brown head.
18. Brushes, assorted.
19. Brushes, dust, hand.
20. Brushes, scrubber, base and hand.
21. Brushes, tar, head.
22. Cables and flexible cords, admiralty pattern.
23. Candles.
24. Cells, dry.
25. Clocks.
26. Cloth, emery.
27. Fittings, steam and boiler.
28. Hides, buffalo, tanned.
29. Hides, oxen, tanned.
30. Hoses.

C.—Contracts entered into by the Controller of Purchase, Bombay Circle—concld.

ENGINEERING AND MISCELLANEOUS STORES—*concld.*

31. Marine stores, miscellaneous.
32. Nails, wire, iron.
33. Paper, glass.
34. Powder, plate, " Goddards ".
35. Polish, metal, " Globe " paste.
36. Rosin, American.
37. Screws, brass, iron and wood.
38. Sheets, India rubber, vulcanised of various thicknesses.
39. Time pieces.

D.—Contracts entered into by the Controller of Purchase, Karachi Circle.

ENGINEERING AND MISCELLANEOUS STORES.

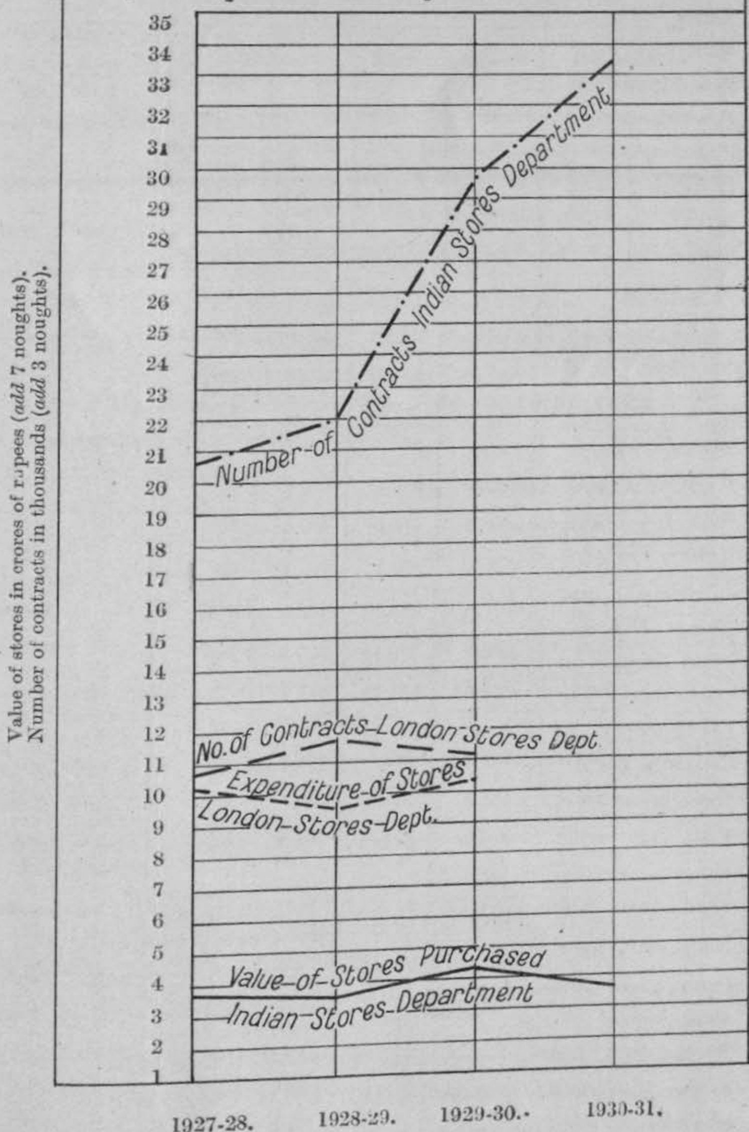
1. Blades, hacksaw.
2. Bolts, nuts, and washers, black.
3. Bolts, tower, iron and brass.
4. Brushes, paint.
5. Carbide, calcium.
6. Clamps, U bolts.
7. Cloth, emery.
8. Cocks, brass, bib.
9. Cocks, stop, G. I.
10. Crucibles, foundry.
11. Cups, grease.
12. Files
13. Hinges, brass and wrought iron.
14. Joints, door, asbestos boiler.
15. Nails, wire, iron.
16. Panes, glass, plain and frosted.
17. Paper, emery.
18. Rivets, Mild, steel.
19. Screws, wood, iron and brass.
20. Shackles.
21. Soda ash and soda caustic.
22. Spanners, single and double ended.
23. Tubes, copper.
24. Thimbles, G. I.
25. Valves. wheel, G. M.

APPENDIX IX.

VALUE OF STORES PURCHASED AND NUMBER OF CONTRACTS PLACED BY THE LONDON AND INDIAN STORES DEPARTMENTS.

(*Vide* paragraph 35 of the report.)

The London Stores Department figures represent expenditure on stores and freight converted into Indian currency at a uniform rate of 1*s.* 6*d.* to the rupee. The Indian Stores Department figures represent the value of contracts placed.



	1927-28.	1928-29.	1929-30.	1930-31.
No. of contracts.				
London Store Department.	10,862	11,654	11,053	
Indian Stores Department.	20,753	21,922	29,767	33,311
Value in thousands of Rupees.				
London Store Department.	1,02,930	94,887	1,00,943	
Indian Stores Department.	37,305	36,018	42,926	37,682

APPENDIX X.

Comparative Statement of Purchases made by the London and Indian Stores Departments.

THE FIGURES ARE IN THOUSANDS OF RUPEES.

(*Vide* paragraph 35 of the Report.)

Indenting Departments.	Textile and leather stores.		Engineering and Miscellaneous Stores.		Other classes of Stores. (*a*)		Total.	
	London Stores Department.	Indian Stores Department.	London Stores Department.	Indian Stores Department.	London Stores Department.	Indian Stores Department.	London Stores Department.	Indian Stores Department.
1. Central Departments. Army—								
1927-28 ..	3,793	6,587	15,255	9,024	8,663	..	27,711	15,611
1928-29 ..	3,794	6,975	18,694	6,300	7,397	..	29,885	13,275
1929-30 ..	3,567	4,492	23,310	7,400	3,576	..	30,453	11,892
2. Central Departments. Civil—								
1927-28 ..	38	1,097	1,940	2,084	5,745	..	7,723	3,181
1928-29 ..	27	1,607	4,317	2,235	3,192	..	7,536	3,842
1929-30 ..	63	1,402	1,208	5,417	3,180	..	4,451	6,819
3. Railways—								
1927-28 ..	359	2,855	31,389	4,755	146	..	31,894	7,610
1928-29 ..	104	2,045	41,986	8,360	136	..	42,226	10,405
1929-30 ..	20	4,117	24,253	10,929	380	..	24,653	15,046
4. Provincial Governments—								
1927-28 ..	78	1,331	8,290	9,359	1,462	..	9,830	10,690
1928-29 ..	138	998	4,635	7,184	1,333	..	6,106	8,182
1929-30 ..	140	1,319	16,186	6,123	1,366	..	17,692	7,442
5. Indian States, Foreign Government and Public bodies—								
1927-28 ..	..	12	..	200	..	..	..	212
1928-29 ..	..	(*b*)	..	344	..	..	..	344
1929-30 ..	..	6	..	1,721	..	..	..	1,727
6. Total—								
1927-28 ..	4,268	11,882	56,874	25,422	16,016	..	77,158	37,304
1928-29 ..	4,063	11,625	69,632	24,423	12,058	..	85,753	36,048
1929-30 ..	3,790	11,336	64,957	31,590	8,502	..	77,249	42,926

N.B.—The figures of the India Store Department, London, have been converted at the rate of 1*s*. 6*d*. = Re. 1.

(*a*) Stores not dealt with by the Indian Stores Department, *e.g.*, medical stores, munitions, stationery and printing, stamps, currency, food stuffs, etc.

(*b*) Items below Rupees one thousand in value.

APPENDIX XI.

List of specifications framed by the Indian Stores Department current at the end of the year 1930-31.

(*Vide* paragraph 38 of the Report.)

INDEX.

Section No.	Name of stores. Main head.	Name of stores. Sub-head.	Classification reference.
1	Bridgework	..	A.
2	Engineers' plant (excluding petty tools)	..	B.
3	Workshop machinery and heavy tools	..	C.
4	Ballast and permanent-way materials ..	..	D.
5	Rolling stock	..	E.
6	Station materials and fencing	..	F.
7	Tools and stores	(*a*) Tools	G/Tools.
		(*b*) Stores—	
		(*i*) Chemicals ..	G/Chemicals.
		(*ii*) Lamps and lamp fittings	G/Lamps.
		(*iii*) Leather and India rubber goods ..	G/Leather.
		(*iv*) Metals	G/Metals.
		(*v*) Miscellaneous ..	G/Misc.
		(*vi*) Painters' stores (oils and paints) ..	G/O. P.
		(*vii*) Timber	G/Timber.
		(*viii*) Hardware; copper, tin and zinc ware.	G/Ware.
		(*ix*) Waterworks stores	G/W. W.

APPENDIX XI—*contd.*

List of specifications framed by the Indian Stores Department current at the end of the year 1930-31—contd.

Section No.	Name of stores. Main head.	Name of stores. Sub-head.	Classification reference.
		(*x*) Cloth, clothing and equipment ..	G/Textiles.
		(*xi*) Stationery ..	G/Stationery.
		(*xii*) Drawing, mathematical and surveying instruments ..	G/Instruments.
		(*xiii*) Printing presses and materials ..	G/Prints.
		(*xiv*) Sanitary stores ..	G/Sanitary.
		(*xv*) Fuel ..	G/Fuel.
		(*xvi*) Furniture ..	G/Furniture.
		(*xvii*) Building materials	G/Buildings.
8	Electrical plant and materials	..	H.
9	Power and industrial plant	..	P. I.

APPENDIX XI—*contd.*

List of Indian Stores Department General Specifications current at the end of the year 1930-31.

Specification No.	Description.	Current edition.
	SECTION 1.—*Bridgework*—A.	
A-33	Steelwork	A-33J. (*c*).
A-34	Steel sheet piling with clutch (joist pattern)..	A-34A.
A-35	Structural steel, plates, sections, *e.g.*, angles, tees, joists, channels, etc., and bars ..	A-35J.
A-40	Bridgework	A-40D.
A-48	Tank and staging	A-48C. (*c*).
A-49	Steel welded tanks with staging welded or rivetted	A-49
A-52	Aeroplane Hanger	A-52 (*a*).
	SECTION 2.—*Engineer's plant* (*excluding petty tools*)—B.	
B-50	Loco multitubular boiler	B-50C.
B-51	5-ton portable hand operated crane for 5′-6″ gauge railway track	B-51.
B-52	Scotch hand derrick crane, constructed of steel	B-52.
B-53	Hand operated overhead travelling and traversing crane	B-53A.
	SECTION 3.—*Workshop machinery and heavy tools*—C.	
C-29	Machine tools, first class	C-29.
C-31	Machine tools	C-31.
	SECTION 4.—*Ballast and permanent-way Materials*—D.	
D-1	Steelwork for light railway track for construction work	D-1C.
D-2	Tip trucks for 1′-6″, 2′-0″ and 2′-6″ gauge railway, contractor's type	D-2C.
D-6	Built-up points and crossings complete with wing rails, lever boxes and all other fittings	D-6.

APPENDIX XI—*contd.*

List of Indian Stores Department General Specifications current at the end of the year 1930-31.

Specification No.	Description.	Current edition.
	SECTION 4.—*Ballast and permanent-way materials*—D—contd.	
D-15	Steel fishbolts and nuts	D-15.
D-16	Steel dogspikes	D-16.
D-17	Steel round spikes for rail chairs	D-17.
D-18	Steel screw spikes for permanent-way ..	D-18.
	SECTION 5.—*Rolling stock*—E.	
E-28	Weighbridge	E-28.
E-29	Engine turntable	E-29A.
E-32	Steam locomotive crane	E-32.
E-37	Laminated springs	E-37B.
E-38	Cast steel wheels with axles for 2′-6″ gauge ..	E-38.
E-42	Mild steel rivets	E-42D.
E-47	Mild steel bolts, nuts and washers, black and galvanized	E-47B.
E-48	Cast steel wheels and axles for light tip trucks and unimportant works	E-48.
E-49	Cast iron superheater headers for locomotives for Railways	E-49A. (*c*).
E-50	Steel tyres for locomotives, tenders, carriages and wagons	E-50.
E-53	Axle boxes, cast steel, for railway rolling stock.	E-53.
E-54	Pulley, blocks for wire and manilla rope ..	E-54 (*a*).
	SECTION 7.—*Tools and Stores.*	
	(*a*) *Tools*—G/Tools.	
G/Tools-1 ..	Tools for earthwork, etc. (picks and beaters, kodalies, powrahs, mamooties or hoes, sledge and other hammers, jumper and drill steel)	G/Tools-1.
„ 2 ..	Anvils	„ 2.

APPENDIX X—*contd.*

List of Indian Stores Department General Specifications current at the end of the year 1929-30.

Specification No.	Description.	Current edition.
	SECTION 7.—*Tools and Stores*—contd.	
	(*b*) *Stores.*	
	(*i*) *Chemicals G-Chemicals.*	
G/Chemicals 9 ..	Nitric acid, commercial	G/Chemicals 9.
" 11 ..	Hydrochloric acid, commercial	" 11.
" 12 ..	Hydrocholoric acid, pure	" 12.
" 14 ..	Sulphuric acid, concentrated, for accumulators	" 14.
" 15 ..	Sulphuric acid, commercial	" 15.
" 16 ..	Alumino-ferric	" 16.
" 17 ..	Sulphate of Alumina	" 17 (*a*).
" 18 ..	Copper sulphate, commercial	" 18 (*a*).
" 19 ..	Cyanide of Potassium for surface hardening of tools.	" 19 (*a*).
	(*iii*) *Leather and India rubber goods*— G/Leather.	
G/Leather-38 ..	Vacuum brake rubber fittings for use on railways.	G/Leather-38.
" 39 ..	Solid tyres for cycles	" 39A.
" 40 ..	Solid tyres and tyre bands for tractors, lorries, etc.	" 40C.
" 41 ..	Pneumatic tyres, outer covers and inner tubes for cycles, cars and motor cycles, etc. ..	" 41D.
" 42 ..	Pneumatic tyres, outer covers and inner tubes for cycles	" 42A.
" 43 ..	Leather buffalo and cow, and sheep skin ..	" 43.
" 45 ..	Meshas	" 45.
" 46 ..	Leather belting	" 46.
" 47 ..	Boots ankle (followers)	" 47.

APPENDIX XI—*contd.*

List of Indian Stores Department General Specifications current at the end of the year 1930-31.

Specification No.	Description.	Current edition.
	(iii) Leather and Indian Rubber goods—	
	G/Leather—contd.	
G/Leather-48 ..	Boots, ammunition, No. 5 quality	G/Leather-48 (*a*).
	(*iv*) *Metals*—G/Metals.	
G/Metals-9 ..	Manganese steel castings	G/Metals-9.
,, 16 ..	Mild steel rods for ferro-concrete work ..	,, 16C.
,, 17 ..	Case hardening and welding quality steel bars and billets	,, 17.
,, 21 ..	Short link chains (iron welded) for all services except marine	,, 21B.
,, 40 ..	Tinned plates	,, 40A.
,, 41 ..	Sheets, mild steel, galvanized, flat corrugated and ridging	,, 41D.
,, 42 ..	Sheets, plain galvanized iron	,, 42.
,, 45 ..	Sheets, milled lead	,, 45A.
,, 46 ..	Pig lead	,, 46.
,, 48 ..	Pig iron	,, 48 (*a*)
,, 51 ..	Small ropes or cords of steel wire	,, 51.
,, 52 ..	Copper alloy for carriage and wagon axle-box brasses	,, 52.
,, 53 ..	Solder, soft	,, 53A.
,, 54 ..	Tin sticks for tinning cooking pots and for similar purposes	,, 54A.
,, 55 ..	Tin in ingots	,, 55.
,, 56 ..	Copper in ingots	,, 56.
,, 57 ..	Antifriction metal for locomotive, carriage and wagon purposes	,, 57A.

APPENDIX XI—*contd.*

List of Indian Stores Department General Specifications current at the end of the year 1930-31.

Specification No.	Description.	Current edition.
	(*iv*) *Metals*—G/Metals—contd.	
G/Metals-58 ..	Copper sheets, annealed for spinning or cold working	G/Metals-58A.
„ 59 ..	Brass sheets, annealed for spinning or cold working	„ 59A.
„ 60 ..	Zinc sheets	„ 60.
„ 61 ..	Bearing metal for axle of railway rolling stocks	„ 61.
„ 62 ..	Solder brazing	„ 62.
„ 63 ..	Solder silver	„ 63.
„ 67 ..	Balls and rollers, steel and ball and roller bearings	„ 67.
„ 68 ..	Brass bars for screwing and machining ..	„ 68.
„ 69 ..	High tensile brass bars and sections, grade 'B' 35 tons per sq. in. quality	„ 69.
„ 70 ..	High tensile brass bars and sections, grade 'A' 30 tons per sq. in. quality	„ 70.
„ 71 ..	Antimony ingots	„ 71A.
	(*v*) *G/Miscellaneous.*—G/Misc.	
G/Misc. 1 ..	Padlocks and locks, box drawers, etc. ..	G/Misc. 1E.
„ 2 ..	Carbide of calcium	„ 2
„ 15 ..	Safes, burglar resisting, non-fire resisting ..	„ 15.
„ 17 ..	Brush sweeping	„ 17.
„ 18 ..	Brush for painting letter boxes	„ 18.
„ 19 ..	Brush for cleaning stamps	„ 19A.
„ 25 ..	Buttons, hollow and badges, brass, gilding metal, nickel silver, German silver, white metal, silver and 'bronzed'.	„ 25

APPENDIX XI—*contd.*

(A) *List of Indian Stores Department General Specifications current at the end of the year 1930-31.*

Specification No.	Description.	Current edition.
	(*v*) *G/Miscellaneous*—G/Misc.—contd.	
G-Misc. 30 ..	Hand chemical fire extinguisher	30-A.
" 32 ..	Lead seals for general purposes	32-A. (c).
" 35 ..	Liquid metal polish	35 (a).
" 36 ..	Lead yarn for caulking	36 (a).
" 37 ..	Buckets, iron, galvanized	37-A. (b)
	(*vi*) *Painter's Stores*—G/O.P.	
G/O. P. 1 ..	Castor seed	G/O. P. 1.
" 3 ..	Shellac	" 3-B.
" 4 ..	Spirits, denatured, methylated	" 4-A.
" 13 ..	Oil, aircraft, medium	" 13.
" 14 ..	Oil, aircraft, heavy	" 14.
" 20 ..	Oil, lubricating, axle for use during hot weather.	" 20-A.
G/O. P.-21 ..	Oil, lubricating, axle for use during cold weather	" 21-A.
" 31 ..	Olive oil	" 31.
" 32 ..	Oil Neat's-foot	" 32.
" 33 ..	Creosote	" 33A.
" 38 ..	Petrol, aviation	" 38.
" 60 ..	Soap, hard	" 60B.
" 61 ..	Soap, soft	" 61B.
" 64 ..	Tar coal for road making	" 64.
" 65 ..	Crude tar	" 65.
" 66 ..	Pitch coal tar, medium	" 66.
" 67 ..	Wood tar	" 67A.

APPENDIX XI—*contd.*

List of Indian Stores Department General Specifications current at the end of the year 1930-31.

Specification No.	Description.	Current edition.
	(vi) Painter's Stores—G/O. P.—contd.	
G/O.P. 68 ..	Oxidised (blown) petroleum bitumen ..	G/O.P. 68.
" 69 ..	Steam refined petroleum bitumen	" 69.
" 95-150 ..	Paints and painter's materials	" 95-150 (*c*)
" 157 ..	Goldsize	" 157A(*c*).
" 161 ..	Paint grey ready mixed suitable for Bitumen roofing	" 161.
" 201 ..	Oil, spindle, extra light	" 201A(*c*).
" 202 ..	Oil, spindle, light	" 202A(*c*).
" 203 ..	Oil, spindle	" 203A(*c*).
" 204 ..	Oil, machinery, light	" 204A(*c*).
" 205 ..	Oil, machinery, medium	" 205A(*c*).
" 206 ..	Oil, engine, light	" 206A(*c*).
" 207 ..	Oil, engine, medium	" 207A(*c*).
" 208 ..	Oil, engine, heavy	" 208A(*c*).
" 211 ..	Oil, internal combustion engine, light ..	" 211A(*c*).
" 212 ..	Oil, internal combustion engine, medium ..	" 212A(*c*).
" 213 ..	Oil, internal combustion engine, heavy ..	" 213A(*c*).
" 214 ..	Oil, internal combustion engine, extra heavy	" 214A(*c*).
" 221 ..	Oil, crank chamber	" 221A(*c*).
" 222 ..	Oil, crank chamber, heavy	" 222A(*c*).
" 231 ..	Oil, compressor, light	" 231A(*c*).
" 232 ..	Oil, compressor, medium	" 232A(*c*)
" 233 ..	Oil, compressor, heavy	" 233A(*c*).
" 241 ..	Oil, cylinder, common	" 241.

APPENDIX XI—*contd.*

List of Indian Stores Department General Specifications current at the end of the year 1930-31.

Specification No.	Description	Current edition.
	(vi) Painter's Stores—G/O. P.—contd.	
G/O.P. 242 ..	Oil, cylinder, pure mineral, ordinary ..	G/O.P. 242A(*c*).
„ 243 ..	Oil, cylinder, pure mineral, superheat ..	„ 243A(*c*).
„ 244 ..	Oil, cylinder, compounded, ordinary ..	„ 244.
„ 245 ..	Oil, cylinder, compounded, superheat ..	„ 245.
„ 246 ..	Oil, cylinder, filtered compounded	„ 246.
„ 247 ..	Oil, cylinder, pure mineral, filtered ..	„ 247.
„ 251 ..	Oil, non-freezing, extra light	„ 251A(*c*).
„ 252 ..	Oil, non-freezing, light	„ 252A(*c*)
„ 253 ..	Oil, common, dark	„ 253A(*c*)
„ 254 ..	Oil, axle	„ 254A(*c*).
„ 255 ..	Oil, lubricating, common dark, extra heavy for gears and running parts of machinery, etc.	„ 255A(*c*).
„ 261 ..	Petrol	„ 261A(*c*).
„ 262 ..	Oil, kerosene, 1st quality	„ 262A(*c*).
„ 263 ..	Oil, kerosene, 2nd quality	„ 263A(*c*).
„ 264 ..	Oil, kerosene, 3rd quality	„ 264A(*c*).
„ 265 ..	Oil, fuel, 1st quality	„ 265A(*c*).
„ 266 ..	Oil, fuel, 2nd quality	„ 266A(*c*).
„ 267 ..	Oil, mineral, colza	„ 267A(*c*).
„ 271 ..	Oil, transformer	„ 271.
„ 273 ..	Oil, sealing	„ 273A(*c*).
„ 281 ..	Oil, castor	„ 281.
„ 282 ..	Oil, cocoanut	„ 282.

APPENDIX XI—*contd.*

List of Indian Stores Department General Specifications current at the end of the year 1930-31.

Specification No.	Description.	Current edition.
	(vi) Painter's Stores—G/O. P.—concld.	
G/O.P. 283 ..	Oil, mustard (rape)	G/O.P. 283.
" 284 ..	Tallow	" 284A(c).
" 291 ..	Grease, cup	" 291.
" 292 ..	Grease, graphite	" 292.
" 293 ..	Mineral Jelly	" 293.
	(vii) Timber—G/Timber.	
G/Timber 30 ..	Deodar sleepers	G/Timber 30A.
" 34 ..	Teak squares	" 34A.
" 35 ..	Teak scantlings	" 35.
" 36 ..	Chir or Dhup squares (Pinus longifolia) ..	" 36(a)
" 37 ..	Toon squares or scantlings (Cedrela toon) ..	" 37 (a).
	(viii) Hardware, copper, tin and zinc ware.—G/Ware.	
G/Ware 30 ..	Wire, ordinary steel, black and galvanized ..	G/Ware 30-B.
" 31 ..	Iron and steel hoops	" 31-A.
" 32 ..	Barbed wire	" 32-C. (c).
" 33 ..	Wire, ordinary steel, round either black or galvanised for making mattress cases for boulder filling for flood protection or similar work.	" 33-A.
" 35 ..	Brass wire gauze, mosquito proof	" 35-A.
	(ix) Waterworks stores.—G/W/W.	
G/W/W 27 ..	Salt glazed earthenware pipes	G/W/W 27B.
" 34 ..	Mild steel pipes and specials for water main and hydraulic power.	" 34.
" 35 ..	Sluice valves	" 35.
" 43 ..	Lead pipes for water	" 43-B.
" 44 ..	W. I. or M. S. pipes and fittings for gas, water and steam.	" 44 (a).

APPENDIX XI—*contd.*

List of Indian Stores Department General Specifications current at the end of the year 1930-31.

Specification No.	Description.	Current edition.
	(x) Cloth, clothing and equipment—G/Textiles.	
G/Tex./C-1 ..	Cotton twine, 5/10*s*.	G/Tex./C-1.
" 4 ..	Cotton canvas, brown	" 4.
" 5 ..	Gauze, absorbent cotton, white, bleached ..	" 5A.
" 6 ..	Boy messenger's bag	" 6.
" 7 ..	Sheets, ground	" 7.
" 8 ..	Paulins, cotton	" 8.
" 9 ..	Durries, blue striped	" 9.
" 10 ..	Bags, kit	" 10.
" 11 ..	Bags, ration, waterproof	" 11.
" 12 ..	Haversack	" 12B.
" 13 ..	Capes, waterproof, Indian, with hood ..	" 13.
" 14 ..	Capes, waterproof, Burman	" 14.
" 15 ..	Newar, grey	" 15A (*c*).
" 16 ..	Putties, cotton of different shades	" 16B.
" 24 ..	Cotton, yarn, grey	" 24C (*c*).
" 28 ..	Dusters (third class)	" 28A.
" 30 ..	Sheeting, unbleached	" 30B.
" 31 ..	Haversack, khaki, cotton drill with side gussets	" 31B.
" 33 ..	Thread, cotton, sewing, of various sizes and colours	" 33C (*c*).
" 34 ..	Musli, bleached	" 34.
" 35 ..	Grey long cloth, unbleached	" 35C.
" 36 ..	Bandage cloth, bleached	" 36D (*c*).
" 37 ..	Black alpaca cloth	" 37A (*c*).

APPENDIX XI—*contd.*

List of Indian Stores Department General Specifications current at the end of the year 1930-31.

Specification No.	Description.	Current edition.
	(x) Cloth, clothing and equipment—G/Textiles—contd.	
G/Tex./C-39 ..	Black paramatta cloth	G/Tex. /C-39A.
„ 40 ..	Twill, khaki	„ 40B.
„ 41 ..	Dhoti cloth, grey	„ 41B
„ 42 ..	Jean cotton, bleached	„ 42.
„ 43 ..	Lining cloth	„ 43C.
„ 44 ..	Pugri cloth, cotton, khaki	„ 44B.
„ 45 ..	Canvas, cotton, khaki, proofed for hoods ..	„ 45D (c).
„ 46 ..	Durries, ordinary quality	„ 46.
„ 47 ..	Mosquito netting 72" wide	„ 47.
„ 48 ..	Jaconet cloth, grey	„ 48.
„ 49 ..	Waste, cotton, white No. 1A	„ 49C
„ 50 ..	Waste, cotton, white No. 1B	„ 50.
„ 51 ..	Waste, cotton, coloured No. 2	„ 51A.
„ 52 ..	Waste, cotton, white or coloured for cleaning ordinary machinery	„ 52.
„ 53 ..	Drill blue, heavy, medium and light qualities, blue and red	„ 53C (c).
„ 54 ..	Drill bleached, heavy, medium and light qualities..	„ 54C (c).
„ 55 ..	Khaki drill, heavy, medium and light qualities	„ 55B.
„ 56 ..	Pugri cloth, cotton, red	„ 56B.
„ 57 ..	Pugri cloth, cotton, blue	„ 57C.
„ 58 ..	Pugri cloth, cotton, bleached	„ 58A.
„ 62 ..	Pugri cloth, cotton, green	„ 62A (c).
„ 63 ..	Webbing cotton, khaki	„ 63.

APPENDIX XI—*contd.*

List of Indian Stores Department General Specifications current at the end of the year 1930-31.

Specification No.	Description.	Current edition.
	(*x*) *Cloth, clothing and equipment*—G/Textiles—contd.	
G/Tex./C-64 ..	Kullahs	G/Tex./C-64.
„ 65 ..	Dosooti, bleached	„ 65A (*c*)
„ 67 ..	Long cloth, bleached	„ 67.
„ 68 ..	Cloth, table, bleached	„ 68A.
„ 69 ..	Sheeting, unbleached	„ 69.
„ 70 ..	Sheets, bed, unbleached	„ 70A (*c*).
„ 71 ..	Lungis with headings of gold thread ..	„ 71.
„ 73 ..	Lungis, ordinary	„ 73A.
„ 75 ..	Napkins, table, bleached	„ 75.
„ 78 ..	Gabardine cotton cloth, blue black shade ..	„ 78A.
„ 80 ..	Long cloth unbleached	„ 80A.
„ 81 ..	Pliable sheets of cotton canvas	„ 81.
„ 82 ..	Cloth markeen	„ 82.
„ 83 ..	Drill, cotton, grey	„ 83A (*c*).
„ 85 ..	Towels, hand	„ 85A
„ 87 ..	Towels, bath, Turkish	„ 87.
„ 88 ..	Tape, cotton, white unbleached	„ 88.
„ 89 ..	Umbrellas	„ 89.
„ 90 ..	Cloth, madapolam	„ 90.
„ 91 ..	Capes with hood, waterproof	„ 91 A (*c*).
„ 92 ..	Canvas, cotton, green, proofed	„ 92 (*a*).
„ 93 ..	Webbing, white and coloured	„ 93A(*c*).
„ 94 ..	Cloth, ticking, grey	„ 94.
„ 96 ..	Coats, waterproof	„ 96.

APPENDIX XI—*contd.*

List of Indian Stores Department General Specifications current at the end of the year 1930-31.

Specification No.	Description.	Current edition.
	(x) *Cloth, clothing and equipment*—G/Textiles—contd.	
G/Tex./C-98 ..	Sheets, bed, bleached	G/Tex./C. 98.
„ 99 ..	Bags for carrying air mail	„ 99.
„ 101 ..	Jerseys, cotton, grey	„ 101B (c).
„ 102 ..	Cloth, Bedford cord, khaki	„ 102.
„ 104 ..	Durries, flooring	„ 104.
„ 105 ..	Bleached muslin, white (cambric)	„ 105.
„ 108 ..	Curtains, mosquito	„ 108 (a).
„ 109 ..	Stocking, cotton, dyed	„ 109 (a).
„ 110 ..	Khrooa cloth	„ 110 (a).
„ 112 ..	Cotton, canvas, khaki water-proofed for hoods (first quality).	„ 112 (a).
„ 124 ..	Waste, cotton, white, superior, for axle box packing.	„ 124A (b).
G/Tex./F-1 ..	Superintendent's camp, bag, flax canvas, single	G/Tex./F-1.
„ 2 ..	Superintendent's camp, bag, flax canvas, double	„ 2.
„ 4 ..	Bags, nose	„ 4B.
„ 5 ..	Buckets, canvas, for ponies	„ 5.
„ 6 ..	Planter's bag, with locking arrangements (unproofed) and planter's bag (proofed) with locking arrange ments	„ 6B.
„ 7 ..	Canvas flax	„ 7.
„ 8 ..	Threads, sewing for upholstry works ..	„ 8A (b).
„ 34 ..	Canvas, French	„ 34A (c).
„ 36 ..	Canvas flax 'C' grade	„ 36.
„ 37 ..	Canvas, white, unproofed for carriage cushions and seats	„ 37.

APPENDIX XI—*contd.*

List of Indian Stores Department General Specifications current at the end of the year 1930-31.

Specification No.	Description.	Current edition.
	(*x*) *Cloth, clothing and equipment*—G/Textiles—contd.	
G/Tex./F-38 ..	Canvas, staying	G/Tex./F-38.
" 45 ..	Dowlas 54″ wide	" 45.
" 46 ..	Paulins	" 46D (*c*).
G/Tex./H-1 ..	Head and heel ropes, manilla	G/Tex./H-1A (*c*).
" 2 ..	Cordages and line, hemp	" 2.
" 3 ..	Hemp twine, English and Country ..	" 3.
" 4 ..	Ropes and cordages, manilla, hawser laid (first quality)	" 4B.
" 5 ..	Ropes and cordages, manilla, hawser laid double quality	" 5.
" 6 ..	Cash bags, tat puttie	" 6.
G/Tex./J-1 ..	Jute twine, 1-ply, 2-ply, 3-ply, 4-ply, 5-ply and 6-ply	G/Tex./J-1A.
" 12 ..	Jute bags, unproofed, for linemen's tools ..	" 12B (*c*).
" 22 ..	Flax or jute, mail bags, proofed and unproofed	" 22B.
" 23 ..	Paulins, jute	" 23B.
" 33 ..	Handbag for R. M. S. sorter	" 33A (*c*).
G/Tex./Misc.-7 ..	Lace, gold	G/Tex./Misc.-7.
" 25 ..	Braid, lace and fringes, gold	" 25.
G/Tex./T-1 ..	General specification for tent components ..	G/Tex./T-1.
" 2 ..	Swiss cottage tent square ended	" 2.
" 3 ..	Hill tent	" 3.
" 4 ..	Tahsildar's tents	" 4.
" 5 ..	Raoti tent, single fly	" 5.
" 20 ..	Tent necessary	" 20A (*b*).

APPENDIX XI—*contd.*

List of Indian Stores Department General Specifications current at the end of the year 1930-31.

Specification No.	Description.	Current edition.
	(*x*) *Cloth, clothing and equipment*—G/Textiles—contd.	
G/Tex./T-21 ..	Miniature swiss cottage tent (round ended) ..	G/Tex./T-21.
„ 22 ..	Indian Officer's tent (double fly)	„ 22.
„ 23 ..	Kashmere tent, round ended	„ 23.
„ 24 ..	Tents square ended, forest officer's pattern ..	„ 24.
„ 40 ..	Servant's pals or shouldaries	„ 40.
„ 41 ..	Light field service tents, 80 lbs.	„ 41.
„ 42 ..	Field Officers, Kabul pals	„ 42.
„ 43 ..	General service tent	„ 43A (*c*).
„ 44 ..	Sawar pal	„ 44.
„ 45 ..	Survey pal, square ended	„ 45.
„ 46 ..	Half pal tents	„ 46A (*c*).
„ 47 ..	Mountain Battery tents	„ 47.
„ 48 ..	Sleeping pal	„ 48.
G/Tex./W-1 ..	Wool, black and mixed, for blankets ..	G/Tex./W-1.
„ 3 ..	Drawers, woollen	„ 3.
„ 4 ..	Balaclava	„ 4.
„ 5 ..	Jackets, cardigan, woollen	„ 5B (*c*).
„ 6 ..	Putties, woollen, khaki and blue	„ 6B (*c*).
„ 7 ..	Bunting cloth, white and coloured	„ 7B.
„ 8 ..	Serges, blue, medium quality and broad cloths	„ 8A.
„ 9 ..	Serges of superior quality	„ 9B.
„ 11 ..	Flannel, silver grey	„ 11.
„ 12 ..	Mittens	„ 12A.

APPENDIX XI—*contd.*

List of Indian Stores Department General Specifications current at the end of the year 1930-31.

Specification No.	Description.	Current edition.
	(*x*) *Cloth, clothing and equipment*—G/Textiles—concld.	
G/Tex./W-13 ..	Packing woollen yarn, for main motor and suspension bearings	G/Tex./W-13.
,, 16 ..	Flannel, white	,, 16B.
,, 18 ..	Serge, blue for shore and sea service ..	,, 18.
,, 19 ..	Serge, khaki	,, 19.
,, 20 ..	Socks, woollen, blue, grey	,, 20.
,, 21 ..	Woollen yarns	,, 21C (*c*).
,, 22 ..	Serges of medium quality	,, 22A.
,, 23 ..	Broad cloth, woollen	,, 23A (*c*).
,, 24 ..	Flannel, green, superior quality	,, 24.
,, 25 ..	Serges of various shades for lining	,, 25.
,, 26 ..	Flannel Angola (union) grey	,, 26
,, 27 ..	Irish frieze for greatcoats	,, 27A.
,, 29 ..	Blankets, saddle	,, 29.
,, 30 ..	Blanket, woollen, scarlet	,, 30A (*c*).
,, 31 ..	Blankets, woollen, ordinary	,, 31.
,, 32 ..	Cloths, blanketting, grey and black for the use of Railway staff	,, 32A.
,, 34 ..	Yarn similar to Illingsworths thrums for packing bearing boxes of axles generators on electric freight locomotives	,, 34.
,, 36 ..	Jerseys, woollen..	,, 36.
,, 52 ..	Felt	,, 52.
,, 53 ..	Numdah, felt for saddles..	,, 53 (*a*).
,, 55 ..	Bannians, flannel, blue grey	,, 55 (*a*).
,, 56 ..	Trimming, worsted, grey for use on all oil cups on locomotives.	,, 56B(*b*).

APPENDIX XI—*contd.*

List of Indian Stores Department General Specifications current at the end of the year 1930-31.

Specification No.	Description.	Current edition.
	SECTION 8.—*Electrical plant and materials*—H.	
H-23	Wall plugs and sockets, two-pin, hand shield side entry and face entry pattern ..	H-23.
H-24	Wall plugs and sockets, three-pin, hand shield side entry and face entry pattern. (Two-pin and earth type)	H-24.
H-25	Plugs and sockets, reversible and non-reversible protected type, two-pin, for circuits up to 250 volts between poles with earthing connection	H-25.
H-26	Switches, tumbler, quick make and quick break (for use on circuits up to 250 volts)	H-26.
H-34	Insulators porcelain, pin or shackle type for low and medium tension electric transmission line	H-34.
H-42	Condensers, metal cased, 1st grade for telegraphs and telephones	H-42.
H-45	Poles, steel, tubular type, for electric power transmission	H-45.
H-46	Electrical flexible cords, single conductors, etc.	H-46A.
H-48	Fans, ceiling, alternating current	H-48C.
H-50	Bridge megger testing set..	H-50.
H-51	Control panel direct current motor iron clad	H-51A.
H-53	Lamp, carbon filament, electric	H-53.
H-55	Fans, ceiling and regulators (D. C.) ..	H-55C (c).
H-56	Wire copper, hard drawn bare	H-56B.
H-57	Cable, electric, single, V. I. R.	H-57A.
H-58	Wood casing and capping	H-58A.
H-60	Copper, wire, hard, drawn, for telegraph or telephone	H-60.

APPENDIX XI—*contd.*

List of Indian Stores Department General Specifications current at the end of the year 1930-31.

Specification No.	Description.	Current edition.
	SECTION 8.—*Electrical plant and materials*—H.—contd.	
H-62	Cables, electric, medium and low pressure paper insulated lead covered and steel armoured, three-core and two-core ..	H-62A.
H-64	Fans, electric, desk or pedestal, D. C. ..	H-64.
H-65	Fans, electric, desk or pedestal, A. C. ..	H-65.
H-67	Single core V. I. R., flame proof cable, and fire resisting cable (250 Volts, 600 meghom grade)	H-67A.
H-68	Two and four core twin and quad twisted rubber insulated lead covered and armoured under water telegraph cable ..	H-68B (c).
H-69	Single core V. I. R. tropical grade insulated cable (250 Volts 600 meghom grade) ..	H-69.
H-70	Cords instrument (tropical finish)	H-70.
H-71	Wire copper, silk covered	H-71.
H-72	Wire copper, cotton covered	H-72.
H-74	Zincs, circular, special design, moulded for Leclanche cells	H-74 (*a*).
H-75	Cells, Leclanche, sack type	H-75 (*a*).
H-76	Screwed pattern, porcelain insulators ..	H-76 (*a*).
H-78	Tungston filament electric lamps	H-78 (*a*).
	SECTION 9.—*Power and Industrial plant*—P. I.	
P. I.-12 ..	Electric machinery	P. I.-12A.
„ 19 ..	Dragline excavator, oil engine operated ..	„ 19B.
„ 20 ..	Dragline excavator, light weight, steam operated coal firing	„ 20A.
„ 26 ..	Jollyboat	„ 26.

APPENDIX XI—*contd.*

List of Indian Stores Department General Specifications current at the end of the year 1930-31.

Specification No.	Description.	Current edition.
	SECTION 8.—*Power and Industrial plant*—P. I.—contd.	
P. I.-35 ..	Dragline excavator, light weight, steam operated coal or oil firing	P. I.-35B.
„ 36 ..	Electric hoists or winches	„ 36.
„ 37 ..	Dredgers (grab type)	„ 37.
„ 38 ..	Petrol paraffin engine	„ 38B.
„ 39 ..	Belting for power drive	„ 39A.
„ 40 ..	Motor boat	„ 40A.
„ 42 ..	Steam pile driving plant	„ 42.
„ 43 ..	Engine, crude oil	„ 43H.
„ 45 ..	Dragline excavator, medium weight, steam operated, coal or oil firing	„ 45B.
„ 60 ..	Centrifugal pumps	„ 60.
„ 61 ..	Stone breaker, etc., oil engine driven ..	„ 61.
„ 62 ..	Mortar grinding mill	„ 62.
„ 65 ..	Dragline excavator, special, light weight, steam operated, coal or oil firing ..	„ 65B.
„ 74 ..	Generators and motors, D. C.	„ 74.
„ 76 ..	Electric power transformers	„ 76.
„ 77 ..	Alternators	„ 77B.
„ 80 ..	Plant and machinery	„ 80.
„ 81 ..	Switch board, D. C.	„ 81B (c).
„ 82 ..	Generator, D. C., 3 wire type and static balancers	„ 82.
„ 95 ..	Crane, electrically operated, overhead travelling and traversing	„ 95.

APPENDIX XI—*concld.*

List of Indian Stores Department General Specifications current at the end of the year 1930-31.

Specification No.	Description.	Current edition.
	SECTION 9.—*Power and Industrial plant*—P. I.—concld.	
P. I.-106 ..	Road roller, steam operated, coal and wood fired	P.I.-106E.
„ 114 ..	Supply of plant and machinery and their erection at site	„ 114 (*a*).

(*a*) Specifications framed during the year 1930-31.

(*b*) Specifications framed and revised during the year 1930-31.

(*c*) Specifications revised during the year 1930-31.

List of Indian Stores Department Special Specifications current at the end of the yea 1930-31.

Specification No.	Description.
	Bridgework.
A-31 ..	.. Standard, mobilization steel, hutting (M. W. Services).
A-32 ..	.. Steel and iron work required by the Indian Public Works Department, Delhi, for the roofing of the Assembly, the Council of State and of the Council of Princes' Chambers and Library of the New Legislative Buildings, Imperial Delhi.
A-36 ..	.. Special construction quarters (portable hutting) for the Lloyd Barrage Project.
	Engineers' plant.
B-48 ..	.. Portable steam pumping engine equipment with vertical boiler and hose pipe for the Bikaner Canal, Punjab.
B-49 ..	.. Crane, one 7-ton Scotch hand derrick for the Irrigation Department, Punjab.
	Rolling Stock.
E-30 ..	.. Metre gauge steam rail motor with goods truck and goods trailer truck for the Sutlej Valley Project, Punjab Public Works Department.
E-31 ..	.. Steam locomotives, 2′ 0″ gauge, for the Sutlej Valley Project, Bikaner Canal, Punjab Public Works Department.
E-40 ..	.. Steam locomotives, 2′ 0″ gauge, for the Sukkur Barrage Project.
E-52 ..	.. Rectangular steel bearing plates for N. W. Railway.
	Lamps and lamp fittings.
G/Lamps 11	.. Railway Mail Service folding candle lantern for the Posts and Telegraphs Department.
,, 16	.. Brass sealing lamp for the Posts and Telegraphs Department.
,, 23	.. Table lamp, hanging lamp and hurricane lantern for Director General, Posts and Telegraphs.
,, 24	.. Incandescent hurricane or hanging lantern petrol pressure type, for the Posts and Telegraphs Department

Specification No.		Description.
		Leathers.
G/Leather	44	.. Waist, belt, leather for Public Works Department, Punjab.
"	49	.. Railway Mail Service portfolio (G pattern).
"	50	.. Portfolio with lock for supervising officer (for Posts and Telegraphs Department).
"	51	.. Railway Mail Service leather portfolio fitted with compartments for stamps, seals, etc.
(a) "	52	.. Leather belts for G. I. P. Railway.
		Metals.
G/Metals	47	.. Antifriction metal, high grade and low grade for the Military Engineer Services.
"	72	.. M. S. sheets for the Telegraph Department.
		Painter's stores.
G./O. P.	43	.. Oils for use of Government Telegraph Department.
"	152	.. Oil, lubricating crank chamber, high speed steam engine No. 2 for Bengal Nagpur Railway.
"	153	.. Kerosene oil K-1 in bulk suitable for gas making for Bengal Nagpur Railway.
		Cloth, clothing and equipments.
G/Tex./C.	17	.. Capes with hood waterproof for the Postal Department.
"	18	.. Cotton wool for bandages for Medical Department.
"	19	.. Long cloth bleached for the Medical Department.
"	21-B	.. Bags dosooti postal for Indian Postal Department.
"	25	.. File bundling sheet of blue drill for the Posts and Telegraphs Department.
"	26	.. Khaki drill sacks, postman's, for the Posts and Telegraphs Department.
"	27A	.. Waterproof khaki drill delivery bag for the Posts and Telegraphs Department.

Specification No.			Description.
	G/Tex./C	29 ..	Clothing materials for the use of the staff of the Posts and Telegraphs Department.
	„	32 ..	Cape with hood water proof for Bombay Police.
	„	38A	Haversack for Burma Military Police.
	„	66 ..	Pugrie, muslin, blue, for North Western Railway.
	„	72 ..	Dosuti, grey, for Borstal Institute, Lahore.
	„	74 ..	Turbans, khaki, for G. I. P. Railway.
	„	76 ..	Dosuti, khaki, for North Western Railway.
	„	77 ..	Dosuti, grey, for E. I. Railway.
(c)	„	79B	Lungis, ordinary, for Sind Police.
	„	84 ..	Grey, drill, unbleached for Borstal Institute, Lahore.
	„	86 ..	Sheeting, grey, for Borstal Institute, Lahore.
	„	97 ..	Dosuti, grey (heavy quality) for Railways.
(c)	„	103B	Sheets, bed bleached for Indian State Railways.
(a)	„	107..	Flashes and belts for E. I. Railway.
(a)	„	111..	Canvas, white (for N. W. Railway) for seats.
(a)	„	113..	Shorts and blouses, khaki, for G. I. P. Railway.
(b)	„	114A	Wicks, cotton, for State Railways.
(a)	„	115..	Red flags with letter P. W. D. for roads under repair.
(b)	„	116A	Badge cloth embroidered C & W for N. W. Railway.
(a)	„	117..	Ground sheets, waterproofed, for prisons, Burma, Bihar and Patna.
(a)	„	118..	Long cloth, bleached, for Government Printing and Stationery Department, Burma.
(a)	„	119..	Cloth, Holland, for N. W. Railway.
(a)	„	120..	Canvas, cotton, black, for N. W. Railway.
(a)	„	121..	Bags, waterproof, for clearance of outside letter boxes.
(a)	„	122..	Long cloth, bleached, for overalls for E. I. Railway.
(a)	„	123..	Duck, cotton, for G. I. P. Railway.
(a)	„	126..	Bags, kit, canvas, cotton, white, for Madras Police.
(a)	G/Tex/J-34	..	Canvas, jute, unproofed, for Inspector General of Police, Madras.
(a)	„	35 ..	Felt, tarred, jute, for N. W. Railway.
	G/Tex/Misc.-1		Waist and shoulder belts of red broad cloth for Postal Department.
(c)	„	2-F	Summer uniforms for the East Indian and E. B. Railway staff.
(c)	„	3-D	Winter uniforms for the East Indian and E. B. Railway staff.
	„	24	Clothing material for Government of India menial staff.
	„	40	Gold lace for the uniforms of Government of India menial staff.
	G/Tex./W	10A	Oxford grey for N. W. Railway.

Specification No.		Description.
	G/Tex/W. 14A	Broad cloth, dark blue, for Bombay Police.
	" 15	Serge, white, for Medical and Veterinary Department.
	" 17	Greatcoats with capes for mounted and foot police, Sind.
(c)	" 28A	Blankets, woollen, for G. I. P. Railway menial staff.
	" 38	Greatcoats with capes for Salt and Excise Department, Sind.
	" 39	Serge, khaki, for G. I. P. Railway.
	" 41	Serge, grey, for E. I. Railway.
	" 50	Drab mixture greatcoat cloth, for Inspector General of Prisons, Bombay.
(a)	" 51	Twill cloth, woollen, khaki, for the Posts and Telegraphs.
(a)	" 57	Great coat cloth, khaki, for the Assam Police (1, 2 and 4 Assam Rifles).

Miscellaneous.

G/Misc./3	.. Kit boxes for sea services for M. E. S.
" 4A	.. Double security bond boxes and stamp boxes for the Posts and Telegraphs Department.
" 5	.. Despatch boxes for the Postmaster General, Bombay.
" 6A	.. Safes for the Director-General of Posts and Telegraphs.
" 7A	.. Tin box for insurance seal types and tin box for stamp types for Railway Mail Service.
" 8	.. Lead seals for Posts and Telegraphs Department.
" 9A	.. Clocks and time-pieces for the Posts and Telegraphs Department.
" 10	.. Tin trays to hold Rs. 1,000 and Rs. 500 for the Posts and Telegraphs Department.
" 11	.. Badges, brass, for the Posts and Telegraphs Department.
" 12	.. Letter box for the Posts and Telegraphs Department.
" 13	.. Punching machine for the Posts and Telegraphs Department.
" 14	.. Spear head with brass bells for the Posts and Telegraphs Department.
" 16	.. Tin sheets for the Posts and Telegraphs Department.
" 20	.. Wooden block for label for the Posts and Telegraphs Department.
" 21A	.. Enamelled sheet steel signboards, letter box plates, etc., for the Posts and Telegraphs Department.
" 22A	.. Button, brass, for the Posts and Telegraphs Department.
" 23	.. Tin seal holder for the Posts and Telegraphs Department.
" 26B	.. Crump's adjustable, proportional modules for the Irrigation Department, Punjab.
" 33	.. Lead seals for the Controller of the Currency.

Specification No.	Description.
	Water Works Stores.
G./W. W./31	.. Wrought iron or mild steel pipes for water for the Bikaner canal.
(c) „ 51-A	.. 89,000 cft. of rising main, specials, sluice valves, air valves, etc., from Ramgarh to Jaipur for the Water Supply Scheme for the Jaipur State P. W. D.
„ 52	.. Distribution piping, specials, valves and accessories for the Water Supply Scheme for Jaipur State P. W. D.
„ 53	.. Piping, specials, valves and accessories for Water Supply, Public Works Department, New Delhi.
	Electrical and Material.
H-59	.. One switchboard generator panel for Ambala.
(c) H-61A	.. Low and medium pressure paper insulated lead covered and steel tape armoured, 3 core and 2 core electric cables for the Indian Public Works Department, Delhi.
H-63	.. Motor alternator set and testing transformer with induction regulator, Controller for the Government Test House, Calcutta.
H-66	.. Composition insulators for Posts and Telegraphs Department.
	Power and Industrial plant.
P. I./27	.. Heave-up boat for the Lloyd Barrage Works, Sukkur.
„ 28	.. Heave-up boat for the Lloyd Barrage Works, Sukkur.
„ 41	.. Pile driver and frame for the Sutlej Valley Project.
„ 46	.. Steam and exhaust piping for the Nalagarh power house.
„ 47	.. Two 25 K. W. oil engine driven generating sets and switchboard for the British Infantry Barracks, Lahore.
„ 48	.. Turbo-alternator set, condensing plant, cranes, boiler, economiser pumps, steel chimney, steam and exhaust pipework, switchboard motor convertor set, rotary convertors, substation plant, extra high tension feeder cables and auxiliaries for the Public Works Department, Delhi.
„ 50	.. Concrete mixers and prime movers required for the Bikaner Canal, Sutlej Valley Project.
„ 51	.. Stone breaker plant and screens for the Nalagarh Quarries, Sutlej Valley Irrigation Project.

Specification No.	Description.
P. I. 52	.. Generating plant, transformers, switchgear, pump and motors, for the Nalagarh Quarries Power Plant, Punjab Irrigation Department.
„ 53	.. Generating plant, transformers, switchgear, pump and motors, for the Ferozepore Division Power Plant, Punjab, Irrigation Department.
„ 54	.. Concrete mixers with motors for the Sutlej Valley Project.
„ 55	.. One 53·4 K. V. A. oil engine driven A. C. generating set with exciter for the Northern India Salt Revenue Department, Sambhar Lake.
„ 56	.. Switchgear for the Northern India Salt Revenue Department, Sambhar Lake.
„ 57	.. A. C. motor and controlgear for the Government of India Press, Simla.
„ 58	.. A. C. motors, controlgear, main switchpanel, cable work and wiring for the experimental Spinning Plant and Technological Laboratory of the Indian Central Cotton Committee, Bombay.
„ 59	.. Two 4 K. W. oil engine-driven generating sets and switch-boards for the Military Works Services, Nowshera Sub-District, Northern Command.
„ 63	.. Passenger, goods and service lifts, required by the Indian Public Works Department, for the new Legislative Buildings, Delhi.
„ 64	.. Passenger, goods and service lifts required by the Indian Public Works Department, for Government House, Delhi.
„ 66	.. Oil engine alternator set, water cooling plant, crane, switchgear and cables for power station; transformer switchgear and cables for a sub-station for the Lloyd Barrage Works, Sukkur.
„ 70	.. Oil engine dynamo set, main fuel tank complete with pipework, water cooling plant, crane, switchgear and cables for power station and motors, controlgears and cables for the press machinery for the Government Postal Press, Aligarh.
„ 78	.. Additional oil engine alternator sets, water cooling plants, transformers, switchgear and cables for the Power Station of the Lloyd Barrage Works, Sukkur.
„ 79	.. Concrete blockyard plant for the Lloyd Barrage Project, Sukkur.
„ 83	.. 325 K. W. oil engine alternator sets, water cooling plant, oil fuel storage tank complete with pipework, crane, transformers, switchgear, and connecting cables, induction motors, E. H. T. feeder cables and accessories for Power Station and Miscellaneous plant; for Salt Mines, Khewra.
„ 84	.. Goods lifts for Postal Press, Aligarh.
„ 85	.. Electrically driven pumping machinery mounted on pontoons for dewatering coffer dams for the Lloyd Barrage Works, Sukkur.
„ 86	.. Oil engine driven power plant for the New Power Station, Municipal Board, Mussooree.
„ 87	.. Plant for Hydro-electric scheme, Municipal Board, Mussooree.
„ 88	.. Oil engine driven power station for Jaipore.

Specification No.	Description.
P. I. 89	.. Pile driving plant mounted on pontoons for the Lloyd Barrage Works, Sukkur.
„ 90	.. Scotchderrick crane, motor driven, to lift 25 and 10 tons, on pontoons for the Lloyd Barrage Works, Sukkur.
„ 91	.. Steam driven paddle tugs for the Lloyd Barrage Works, Sukkur.
„ 92	.. Barges for the Lloyd Barrage Works, Sukkur.
„ 93	.. Oil engine driven (diesel) Bucyrus dragline excavators, 30 B, for the Lloyd Barrage Works, Sukkur.
„ 94	.. Oil engine driven (diesel) Bucyrus dragline excavators, 50 B, for the Lloyd Barrage Works, Sukkur.
„ 96	.. Electrical plant for Public Works Department, Punjab.
„ 97	.. 30-B diesel engine driven Bucyrus dragline excavator for the Lloyd Barrage Works, Sukkur.
„ 99	.. Steel barges of capacity up to 100 tons of store for the Lloyd Barrage Works, Sukkur.
„ 100	.. 50-B diesel engine driven Bucyrus dragline excavator for the Lloyd Barrage Works, Sukkur.
„ 101	.. Sluice gates for the Panjnad Barrage on the river Sutlej, thirty three gates, clear width of opening 60′-0″, 18′-6″ deep for Punjab Public Works Department.
„ 102	.. Gates for the undersluices for the weir across the river Damodar.
„ 103	.. 250 K. W. 2300 volts full diesel oil engine alternator sets for the Public Works Department, Simla.
„ 104	.. One 600 K. W. 3300 volts, oil engine alternator set, oil fuel service tanks, etc., for additional power station, Jaipur, Public Works Department.
„ 105	.. Steel barges of capacity up to 100 tons of stone for Lloyd Barrage Works, Sukkur.
„ 107	.. Three 200 K. W. 400 volts water turbine alternator sets, etc., for the Sumera Hydro-Electric Pumping and Power Scheme for the P. W. D., United Provinces.
„ 108	.. Radial gates for the head and cross regulators for main canal and branches of the Lloyd Barrage and Canal Construction, Sind.
„ 109	.. Sluice gates vertical sliding and radical types for small branches, distributions and minors of the Lloyd Barrage and Canal Construction, Sind.
(*a*) „ 115	.. Seagoing steam, lighter for Forest Department, Port Blair.

(*a*) Specifications framed during the year.

(*b*) Specifications framed and revised during the year.

(*c*) Specifications revised during the year.

APPENDIX XII.

Value and tonnage of stores inspected, number of tests and analyses carried out, and the amount of fees earned.

(*Vide* paragraphs 45, 48, 54 and 59 of the Report.)

—	Value of stores inspected and charged on value.				Tonnage of stores inspected and charged on weight.				Number of tests and analyses carried out.				Fees earned.			
	1927-28.	1928-29.	1929-30.	1930-31.	1927-28.	1928-29.	1929-30.	1930-31.	1927-28.	1928-29.	1929-30.	1930-31.	1927-28.	1928-29.	1929-30.	1930-31.
Calcutta Inspection Circle ..	3,42,37,960	2,71,43,731	4,33,15,920	3,74,98,794	..	39,714	44,148	40,340	..	..	..	..	4,24,687	2,99,332	5,09,606	4,39,189
Bombay Inspection Circle ..	1,12,23,828	1,21,60,466	1,31,96,023	1,12,49,991	..	591	80	193	..	..	..	..	1,14,260	1,22,537	1,32,189	1,13,043
Karachi Inspection Circle ..	56,14,202	72,93,678	90,06,402	79,39,758	..	2,210	4,600	274	..	..	..	..	55,907	75,672	99,264	79,946
Upper India Inspection Circle	46,63,250 (Upper India Inspection Circle and Cawnpore Inspection Branch together)	57,90,331 (together)	71,14,958 (together)	51,09,146	..	..	..	..	..	..	..	..	46,633 (together)	57,903 (together)	71,150 (together)	52,092
Cawnpore Inspection Branch				24,57,120	..	..	..	..	..	..	..	..				24,616
Madras Inspection Branch	5,39,552	6,33,590	8,04,066	8,41,026	..	..	..	..	..	..	..	..	5,396	6,336	8,041	8,410
Total Provincial Inspectorates.	5,62,78,792	5,30,21,796	7,34,37,369	6,50,95,835	..	42,515	48,828	40,807	..	..	..	..	6,46,883	5,61,780	8,20,250	7,17,296
Metallurgical Inspectorate	8,32,023	12,11,310	13,61,768	10,39,272	3,31,628	1,76,249	2,94,281	2,87,206	5,540	3,303	5,292	7,067	4,33,490	2,30,807	3,58,909	3,57,736
Government Test House, Alipore.	..	..	..	..	..	..	..	..	7,525	9,133	8,428	8,628	1,86,400	1,96,936	2,05,375	1,81,735
Government Test House, Bombay.	..	..	..	..	..	..	..	..	..	517	553	561	..	9,731	10,621	10,118
Grand Total ..	5,71,10,815	5,42,33,106	7,47,99,137	6,61,35,107	3,31,628	2,18,764	3,43,109	3,28,013	13,065	12,953	14,273	16,256	12,66,773	9,99,254	13,95,155	12,66,885
Deduct tests carried out for the Indian Stores Department.									2,948	3,122	3,927	3,876	67,662	67,057	91,142	83,892
Net total									10,117	9,831	10,346	12,380	11,99,111	9,32,197	13,04,013	11,82,993

APPENDIX XIII.

Statement showing inspection work carried out for various authorities (material charged on value).

(*Vide* paragraphs 5, 45 and 54 of the Report.)

ose behalf stores were spected.	Calcutta Inspection Circle.				Bombay Inspection Circle.			
	1927-28.	1928-29.	1929-30.	1930-31.	1927-28.	1928-29.	1929-30.	1930-31.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
by the Indian Stores	72,18,506	84,52,683	1,11,68,984	1,26,65,834	61,95,789	55,88,025	78,85,779	84,75,293
l by other Depart-								
Government—Depart- Civil	416	..	768	756	..	..	..	..
Govt. Depts.—Military	..	..	..	..	..	..	..	..
, State-worked	1,97,30,334	1,18,41,172	2,16,94,619	1,58,65,506	33,86,663	45,05,384	38,44,808	20,07,798
, Company-worked	60,60,680	60,86,441	1,00,72,775	84,48,302	15,58,297	20,33,228	13,84,347	6,77,859
, worked by Indian	92,725	6,830	58,385	42,064	74,745	32,836	68,217	87,454
ilway Administrations	2,58,83,739	1,79,34,443	3,18,25,779	2,43,55,872	50,19,705	65,71,948	52,97,372	27,73,111
l Governments	5,719	31	1,64,248	2,15,054	8,334	333	..	..
dies	5,94,347	1,240	1,45,369	1,91,866	..	..	10,542	..
oncerns and Indian	5,35,233	7,55,334	10,372	67.803	..	660	2,330	1,587
overnments and public	..	..	400	1,609	..	..	..	..
ced by other Depart-	2,70.19,454	1,86,91,048	3,21,46,936	2,48,32,960	50,28,039	65,72,441	53,10,244	27,74,698
RAND TOTAL	3,42,37.960	2,71,43,731	4,33,15,920	3,74,93,794	1,12,23,828	1,21,60,466	1,31,96,023	1,12,49,991

ose behalf stores were spected.	Karachi Inspection Circl .				Upper India Inspection Circle.				Cawnpore Inspe tion Branch.
	1927-28.	1928-29.	1929-30.	1930-31.	1927-28. (a)	1928-29. (a)	1929-30. (a)	1930-31.	1930-31.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
by the Indian Stores	48,94,554	44,75,338	56,35,886	65,47,995	45,59,530	57,52,906	70,82,063	50,66,224	24,23,192
l by other Depart-									
Government—Depart- Civil	..	..	..	..	..	..	..	..	..
Govt. Depts.—Military	..	..	..	1,170	..	..	..	..	..
, State-worked	4,75,385	28,09,797	33,54,290	13,77,254	1,03,720	37,425	12,155	10,922	24,895
, Company-worked	..	7,591	..	..	..	..	..	..	..
, worked by Indian	..	952	16,226	10,035	..	..	..	..	..
ilway Administrations	4,75,385	28,18,340	33,70,516	13,87,289	1,03,720	37,425	12,155	10,922	24,895
l Governments	1,05,342	..		..	..	..	..	32,000	..
dies	142	..		..	..	..	..	..	..
oncerns and Indian	1,38,779	..	..	3,304	..	..	..	..	..
overnments and public	..	..	..	..	..	..	20,740	..	9,033
ced by other Depart-	7,19,648	28,18,340	33,70,516	13,91,763	1,03,720	37,425	32,895	42,922	33,928
RAND TOTAL	56,14,202	72,93,678	90,06,402	79,39,758	46,63,250	57,90,331	71,14,958	51,09,146	24,57,120

ose behalf stores were spected.	Madras Inspection Branch.				Total value of Stores charged on value inspected by Provincial Inspectorates.			
	1927-28.	1928-29.	1929-30.	1930-31.	1927-28.	1928-29.	1929-30.	1930-31.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
by the Indian Stores	5,39,552	6,33,590	8,04,066	8,41,026	2,34,07,931	2,49,02,542	3,25,76,772	3,60,19,564
l by other Depart-								
Government—Depart- Civil	..	..	..	..	416	..	768	756
Govt. Depts.—Military	..	..	..	..	..	..	..	1,170
, State-worked	..	..	..	..	2,36,96,102	1,91,93,778	2,89,05,872	1,92,86,375
, Company-worked	..	..	..	..	76,18,977	81,27,260	1,14,57,122	91,26,161
, worked by Indian	..	..	..	..	1,67,470	40,618	1,42,828	1,39,553
ilway Administrations	..	..	..	..	3,14,82,549	2,73,61,656	4,05,05,822	2,85,52,089
l Governments	..	..	..	..	1,19,395	364	1,64,248	2,47,054
dies	..	..	..	..	5,94,489	1,240	1,55,911	1,91,866
oncerns and Indian	..	..	..	..	6,74,012	7,55,994	12,702	72,694
overnments and public	..	..	..	..	..	..	21,140	10,642
ced by other Depart-	..	..	..	..	3,28,70,861	2,81,19,254	4,08,60,591	2,90,76,271
RAND TOTAL	5,39,552	6,33,590	8,04,066	8,41,026	5,62,18,792	5,30,21,796	7,34,37,369	6,50,95,835

ose behalf stores were spected.	Metallurgical Inspectorate, Tatanagar.				Total value of Stores inspected and charged on value.			
	1927-28	1928-29.	1929-30.	1930-31.	1927-28.	1928-29.	1929-30.	1930-31.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
by the Indian Stores	1,65,546	1,35,981	11,68,607	9,51,653	2,35,73,477	2,50,38,523	3,37,45,385	3,69,71,217
l by other Depart-								
Government—Depart- Civil	6,31,585	10,71,088	..	..	6,32,001	10,71,088	768	756
Govt. Depts.—Military	..	..	..	..	..	..	..	1,170
, State-worked	2,424	748	..	..	2,36,98,526	1,91,94,526	2,89,05,872	1,92,86,37
, Company-worked	22,000	..	..	..	76,40,977	81,27,260	1,14,57,122	91,26,16
, worked by Indian	..	..	..	..	1,67,470	40,618	1,42,828	1,39,55
ilway Administrations	24,424	748	..	..	3,15,06,973	2,73,62,404	4,05,05,822	2,85,52,08
l Governments	..	..	..	..	1,19,395	364	1,64,248	2,47,05
dies	..	..	..	..	5,94,489	1,240	1,55,911	1,91,8
oncerns and Indian	10,468	3,493	1,93,161	87,619	6,84,480	7,59,487	2,05,863	1,60,31
overnments and public	..	..	..	..	..	..	21,140	10,6
ced by other Depart-	6,66,477	10,75,329	1,93,161	10,39,272	3,35,37,338	2,91,94,583	4,10,53,752	2,91,63,8
RAND TOTAL	8,32,023	12,11,310	13,61,768	10,39,272	5,71,10,815	5,42,33,106	7,47,99,137	6,61,35,1

(*a*) The figures include work done by the Cawnpore Branch.

APPENDIX XIV.

Statement showing inspection work carried out for various authorities which is charged on weight.

(*Vide* paragraphs 5, 45 and 54 of the Report.)

Authorities on whose behalf stores were inspected.	Calcutta Inspection Circle.			Bombay Inspection Circle.			Karachi Inspection Circle.			Total Provincial Inspectorates.			Metallurgical Inspectorate, Tatanagar.				Total Tonnage of stores inspected and charged on Weight.			
	1928-29.	1929-30.	1930-31.	1928-29.	1929-30.	1930-31.	1928-29.	1929-30.	1930-31.	1928-29.	1929-30.	1930-31.	1927-28.	1928-29.	1929-30.	1930-31.	1927-28.	1928-29.	1929-30.	1930-31.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1. Central Government Departments, Civil.	..	..	..	..	..	..	..	..	..	..	..	..	1,841	2,145	71	..	1,841	2,145	71	..
2. Central Government Departments, Military.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	65	..	..	..	65
3 Railways, State-worked	17,940	16,602	27,330	591	80	193	2,210	4,600	274	20,741	21,282	27,797	130,343	30,641	64,192	81,871	130,343	51,382	85,474	109,668
4. Railways, Company-worked ..	20,229	23,123	6,577	..	..	..	..	..	..	20,229	23,123	6,577	59,899	57,598	62,735	37,720	59,899	77,827	85,858	44,297
5. Railways—worked by Indian States	..	..	..	..	..	..	..	..	..	..	..	..	..	9	1,840	4,564	..	9	1,840	4,564
Total Railway Administrations ..	58,169	39,725	33,907	591	80	193	2,210	4,600	274	40,970	44,405	34,374	190,242	88,248	128,767	124,155	190,242	129,218	173,172	158,529
6. Provincial Governments	..	6	180	..	..	..	..	..	..	..	6	180	..	..	..	..	..	..	6	180
7. Public bodies	..	679	166	..	..	..	..	..	..	..	679	166	..	..	..	..	..	..	679	166
8. Private concerns and Indian States ..	1,545	2,836	3,512	..	..	..	..	..	..	1,545	2,836	3,512	139,545	85,856	165,443	162,986	139,545	87,401	168,279	166,498
9. Foreign Governments and public bodies.	..	902	2,575	..	..	..	..	..	..	..	902	2,575		..	..	..	..	..	902	2,575
Total ..	39,714	44,148	40,340	591	80	193	2,210	4,600	274	42,515	48,828	40,807	331,628	176,249	294,281	287,206	331,628	218,784	343,109	328,013

APPENDIX XV.

(Statement showing the Numbers of Tests and Analyses carried out for various authorities.)

(*Vide* paragraphs 5, 48, 54 & 59 of the Report.)

Authorities on whose behalf tests, analyses etc., carried out.	Metallurgical Inspectorate, Tatanagar.				Government Test House, Alipore.				Government Test House, Bombay.			Total number of tests and analyses carried out.			
	1927-28.	1928-29.	1929-30.	1930-31.	1927-28.	1928-29.	1929-30.	1930-31.	1928-29.	1929-30.	1930-31.	1927-28.	1928-29.	1929-30.	1930-31.
For the Indian Stores Department.	6	46	26	..	2,942	2,584	3,358	3,344	492	543	532	2,948	3,122	3,927	3,876
Outside authorities—															
1. Central Government, Civil.	..	3	12	2	217	184	281	197	..	2	..	217	187	295	199
2. Central Government, Military.	..	5	3	..	829	797	960	704	..	..	..	829	802	963	704
3. Railways, State-worked	12	31	54	201	755	2,745	1,638	1,252	..	..	..	767	2,776	1,692	1,453
4. Railways, Company-worked	2	5	15	12	118	181	200	120	1	2	26	120	187	217	158
5. Railways, worked by Indian States.	..	8	..	1		31	26	29	..	..	..		39	26	30
Total Railway Administrations.	14	44	69	214	873	2,957	1,864	1,401	1	2	26	887	3,002	1,935	1,641
6. Provincial Governments	5	11	20	9	410	344	309	466	3	..	..	415	358	329	475
7. Public bodies ..	..	..	..	..	957	512	100	173	..	..	..	957	512	100	173
8. Private concerns and Indian States.	5,515	3,194	5,162	6,842	1,297	1,755	1,556	2,343	21	6	3	6,812	4,970	6,724	9,188
Total ..	5,540	3,303	5,292	7,067	7,525	9,133	8,428	8,628	517	553	561	13,065	12,953	14,273	16,256

APPENDIX XVI.

Statement Showing the various articles tested at the Government Test House, Alipore, during the year 1930-31.

(*Vide* paragraph 59 of the Report.)

Serial No.	Article.	Serial No.	Article.
1	Acids.	26	Cement.
2	Accumulators.	27	Chains.
3	Aluminium.	28	Chemicals.
4	Alumino ferric.	29	Clay.
5	Aluminium sulphate.	30	Coal.
6	Ammonium sulphate.	31	Coal tar.
7	Antimony.	32	Coke.
8	Apparatus, flash point.	33	Concrete.
9	Asbestos.	34	Copper, bars, rods, sheets.
10	Ashpalt.	35	Cordages.
11	Battery Box.	36	Deposits.
12	Batteries.	37	Efflorescence.
13	Beltings.	38	Emery powder.
14	Benzene.	39	Fabrics, cotton.
15	Bitumen.	40	Fabrics, jute.
16	Blackings	41	Fabrics, woollen.
17	Bottles, glass.	42	Fans and regulators.
18	Brass bars, rods, and sheets.	43	Felspar.
19	Bricks.	44	Ferro silicon.
2	Bronze.	45	Fibres, jute.
21	Cables.	46	Files of sorts and sizes.
22	Calcium carbide.	47	Fitting, electrical.
23	Candles.	48	Fittings, vacuum brake.
24	Canvas.	49	Flooring compositions.
25	Cells.	50	Gas, oxygen.

Serial No.	Article.	Serial No.	Article.
51	Gauge, meter.	78	Minerals.
52	Gauges, pressure.	79	Molasses.
53	Gauges, weighing machine.	80	Naptha.
54	Gauge, wire.	81	Nickel.
55	Glass.	82	Oil, Creosote
56	Gold.	83	Oil, fish.
57	Graphite.	84	Oil, fuel.
58	Grease.	85	Oil, kerosene.
59	Hinges, brass.	86	Oil, lubricating.
60	Hooks, drawbar.	87	Oil, vegetable.
61	Hydrometer.	88	Paints and pigments.
62	Ink.	89	Paints remover.
63	Insulators.	90	Petrol.
64	Iron, angles, bars, plates.	91	Pipes, asbestos.
65	Knives.	92	Pipes, concrete.
66	Lamps, electric.	93	Pipes, hose, canvas.
67	Lamps, hurricane, kerosene, gas.	94	Pipes, steel.
68	Lead.	95	Pipes, stoneware.
69	Leather.	96	Pipes, strainer.
70	Lime.	97	Pitch.
71	Machines, weighing.	98	Polishes, french.
72	Manganese.	99	Polishes, leather.
73	Magnesite, crude.	100	Polishes, metal.
74	Metals antifriction.	101	Preservatives, wood.
75	Metals, gun.	102	Putty.
76	Meters, electric.	103	Rails.
77	Mica.	104	Rail joints.

Serial No.	Article.	Serial No.	Article.
105	Ropes, metallic.	127	Spirit.
106	Ropes, non-metallic.	128	Starch.
107	Rosin.	129	Steel, angles, bars, plates, etc.
108	Rubber bearing.	130	Stone.
109	Rubber sheetings.	131	Sulphur.
110	Sac negative elements.	132	Tallow.
111	Sajeematee.	133	Tapes, cotton.
112	Salt.	134	Thermometers.
113	Sand.	135	Threads.
114	Scissors.	136	Tiles.
115	Screw couplings.	137	Timber.
116	Seeds, castor.	138	Tin.
117	Shackles.	139	Turpentine.
118	Shellac.	140	Twines.
119	Sheets, corrugated, G. I.	141	Varnishes.
120	Slag.	142	Voltmeter.
121	Sleepers, Ry., steel.	143	Water.
122	Sludge.	144	Wires.
123	Soap.	145	Wood fuel.
124	Soda.	146	Yarns.
125	Soil.	147	Zinc drillings, ingots, etc.
126	Solder.		

APPENDIX XVII.

Statement showing the various articles tested at the Government Test House, Bombay, during the yrear 1930-31.

(*Vide* paragraph 48 of the report.)

Serial No.	Articles.
1	Canvas, flax and jute (Proofed and un-proofed).
2	Cloth, cotton (Physical and Chemical tests).
3	Cloth, woollen (Physical and Chemical tests).
4	Cabtyre cables (for tinning test).
5	Coir Fibres.
6	Coal tar (for painting purposes).
7	Oil, Fuel.
8	Oil, Lubricating.
9	Oil, Kerosene.
10	Oil, Vegetable.
11	Paint (lamp black).
12	Putties (Physical and dye tests).
13	Soaps (hard and soft).
14	Stoneware pipes (for absorption test).
15	Strings, cotton.
16	Tapes, cotton.
17	Turpentines.
18	Twines, cotton.
19	Varnishes (Copal).
20	Waterproof cloth.
21	Yarn (Cotton and Woollen).

APPENDIX XVIII.

Statement of work done by the Indian Stores Department, year by year, since its constitution.

(*Vide* paragraph 8 of the Report.)

Year.	Value of textile stores and leather good purchased.	Value of Engineering and miscellaneous stores purchased.	Total value of stores purchased.	Amount of stores inspected and charged on value.	Tonnage of stores inspected and charged on weight.	Tests and analyses carried out.	Total fees earned.
	Rs.	Rs.	Rs.	Rs.	Tons.	Nos.	Rs.
1921-22 (January-March 1922) ..	59,27,330	..	59,27,330	..	..	..	59,273
1922-23	1,64,78,305	..	1,64,78,305	1,42,79,333	107,648	5,744	4,42,168
1923-24	1,17,08,745	50,15,656	1,67,24,401	2,21,45,403	171,797	7,364	6,20,748
1924-25	1,33,26,953	1,25,84,188	2,59,11,141	2,13,73,382	251,760	9,989	8,57,941
1925-26	1,18,81,516	1,47,86,417	2,66,67,933	3,98,78,885	292,550	9,932	11,08,043
1926-27	1,62,86,293	2,35,95,952	3,98,82,245	5,19,88,643	336,368	12,354	15,01,075
1927-28	1,18,82,009	2,54,22,663	3,73,04,672	5,71,10,815	331,628	13,065	15,72,158
1928-29	1,16,24,973	2,44,23,101	3,60,48,074	5,42,33,106	218,764	12,953	12,92,677
1929-30	1,13,36,292	3,15,89,409	4,29,25,701	7,47,99,137	343,109	14,273	17,33,300
1930-31	98,37,157	2,78,45,539	3,76,82,696	6,61,35,107	328,013	16,256	15,59,839
Total from 1st January 1922 to 31st March 1931.	12,02,89,573	16,52,62,925	28,55,52,498	40,19,43,811	2,381,637	101,930	1,07,47,222

INDEX.

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PARAGRAPHS.

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M—*contd.*

P—*contd.* PARAGRAPHS.

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